

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: _____ Examiner #: _____ Date: _____
 Art Unit: _____ Phone Number 30 _____ Serial Number: _____
 Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: _____

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

STAFF USE ONLY

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: _____	NA Sequence (#) _____	STN _____
Searcher Phone #: if Contact: Sheppard	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: tel: 305-4499	Bibliographic _____	Dr.Link _____
Date Completed: 1/1/1	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: July 3, 2001, 10:25:40 ; Search time 11.69 Seconds
(Without alignments)
191.279 Million cell updates/sec

Title: US-09-541-752-2_COPY_235_345
Perfect score: 621
Sequence: 1 VVDNLRLTEVRLYSCTPRN.....DVALHEHEECDCVCRGSTG 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 193259 seqs, 20144635 residues

Total number of hits satisfying chosen parameters: 193259

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%
Maximum Match 100%

Listing first 45 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/2/1aa/5A_COMB.pep:*
2: /cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
3: /cgn2_6/ptodata/2/1aa/6A_COMB.pep:*
4: /cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
5: /cgn2_6/ptodata/2/1aa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/2/1aa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	119.5	19.2	321	US-08-915-795-9	Sequence 9, Appl
2	119.5	19.2	358	US-08-915-795-8	Sequence 8, Appl
3	115.5	18.6	325	US-08-915-795-3	Sequence 3, Appl
4	115.5	18.6	354	US-08-915-795-5	Sequence 5, Appl
5	105	16.9	109	US-08-094-079-2	Sequence 2, Appl
6	105	16.9	109	US-08-094-079-3	Sequence 3, Appl
7	105	16.9	109	US-08-804-953-3	Sequence 3, Appl
8	105	16.9	109	US-08-691-794-4	Sequence 4, Appl
9	105	16.9	109	PCT-US91-02766-18	Sequence 18, Appl
10	105	16.9	109	PCT-US93-02612-1	Sequence 1, Appl
11	105	16.9	109	5498600-3	Patent No. 5498600
12	105	16.9	119	US-08-257-494D-1	Sequence 1, Appl
13	105	16.9	120	5428135-2	Patent No. 5428135
14	105	16.9	146	US-08-989-251-2	Sequence 2, Appl
15	105	16.9	146	US-08-989-251-25	Sequence 25, Appl
16	105	16.9	146	US-09-340-250-2	Sequence 2, Appl
17	105	16.9	146	US-09-340-250-25	Sequence 25, Appl
18	105	16.9	160	US-08-094-079-1	Sequence 1, Appl
19	105	16.9	188	US-08-469-427A-11	Sequence 11, Appl
20	105	16.9	188	US-08-609-443B-11	Sequence 11, Appl
21	105	16.9	188	US-08-569-063C-11	Sequence 11, Appl
22	105	16.9	188	US-08-795-430-57	Sequence 57, Appl
23	105	16.9	190	US-08-867-352-25	Sequence 25, Appl
24	105	16.9	205	US-08-989-251-27	Sequence 27, Appl
25	105	16.9	205	US-08-989-251-37	Sequence 37, Appl
26	105	16.9	205	US-09-340-250-27	Sequence 27, Appl
27	105	16.9	205	US-09-340-250-37	Sequence 37, Appl

28	105	16.9	207	US-08-609-443B-15	Sequence 15, Appl
29	105	16.9	207	US-08-569-063C-15	Sequence 15, Appl
30	105	16.9	220	5175255-4	Patent No. 5175255
31	105	16.9	241	US-08-387-845-4	Sequence 4, Appl
32	105	16.9	241	US-08-989-811-6	Sequence 6, Appl
33	105	16.9	241	US-08-778-275-4	Sequence 4, Appl
34	105	16.9	241	US-08-824-996-8	Sequence 8, Appl
35	105	16.9	241	US-08-989-251-29	Sequence 29, Appl
36	105	16.9	241	US-09-042-105-6	Sequence 6, Appl
37	105	16.9	241	US-08-867-352-4	Sequence 4, Appl
38	105	16.9	241	US-09-340-250-29	Sequence 29, Appl
39	105	16.9	241	US-08-795-430-54	Sequence 54, Appl
40	105	16.9	241	PCT-US96-09001-9	Sequence 9, Appl
41	105	16.9	241	5194596-15	Patent No. 5194596
42	105	16.9	241	5219739-15	Patent No. 5219739
43	105	16.9	282	US-08-445-847A-1	Sequence 1, Appl
44	104.5	16.8	109	US-08-691-794-3	Sequence 3, Appl
45	104.5	16.8	121	5194596-19	Patent No. 5194596

ALIGNMENTS

RESULT 1
US-08-915-795-9
Sequence 9, Application US/08915795
Patent No. 6235713
GENERAL INFORMATION:
APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Karl ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
CITY: Washington
STATE: DC
COUNTRY: United States of America
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/915,795
FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064/42983
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A
INFORMATION FOR SEQ ID NO: 9:
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
TISSUE TYPE: Mouse Lung
US-08-915-795-9
Query Match 19.2% Score 119.5; DB 4; Length 321;
Best Local Similarity 33.3% Pred. No. 1.4e-05;
Matches 36; Conservative 15; Mismatches 42; Indels 15; Gaps 6;

QY 4 LNLLEEVRLYSCTPRNFSVSIREEL-KRTDTIFMPGCLLVKRCGNCACCLHNCNECOC 62
DB 99 LKVIDEEMORTQCSPRETCVEVASELGKTTNTFFKPPCVNFRGCG---CC---NEGVNVC 153
QY 63 V---PSKVTKKYHEVLQLRPKTGVRGLHKSITDVALEHHEECDCVCRG 107
DB 154 MMTSTSYISKOLFETISV--PLTSV---PELVYVKIANHTGCKCLPTG 195

RESULT 2
US-08-915-795-8
Sequence 8, Application US/08915795
Patent No. 6235713
GENERAL INFORMATION:
APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Karl ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
CITY: Washington
STATE: DC
COUNTRY: United States of America
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/915,795
FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064/42983
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 358 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
TISSUE TYPE: Mouse Lung
US-08-915-795-8

Query Match 19.2%; Score 119.5; DB 4; Length 358;
Best Local Similarity 33.3%; Pred. No. 1.5e-05;
Matches 36: Conservative 15; Mismatches 42; Indels 15; Gaps 6;

QY 4 LNLLEEVRLYSCTPRNFSVSIREEL-KRTDTIFMPGCLLVKRCGNCACCLHNCNECOC 62
DB 104 LKVIDEEMORTQCSPRETCVEVASELGKTTNTFFKPPCVNFRGCG---CC---NEGVNVC 158
QY 63 V---PSKVTKKYHEVLQLRPKTGVRGLHKSITDVALEHHEECDCVCRG 107
DB 159 MMTSTSYISKOLFETISV--PLTSV---PELVYVKIANHTGCKCLPTG 200

RESULT 3
US-08-915-795-3
Sequence 3, Application US/08915795

Patent No. 6235713
GENERAL INFORMATION:
APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Karl ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
CITY: Washington
STATE: DC
COUNTRY: United States of America
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/915,795
FILING DATE:
CLASSIFICATION: 536
ATTORNEY/AGENT INFORMATION:
NAME: EVANS, Joseph D.
REGISTRATION NUMBER: 26,269
REFERENCE/DOCKET NUMBER: 1064/42983
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 628-8800
TELEFAX: (202) 628-8844
TELEX: N/A
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 325 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
HYPOTHETICAL: NO
ORIGINAL SOURCE:
TISSUE TYPE: Human Breast
US-08-915-795-3

Query Match 18.6%; Score 115.5; DB 4; Length 325;
Best Local Similarity 33.0%; Pred. No. 3.8e-05;
Matches 34: Conservative 14; Mismatches 44; Indels 11; Gaps 5;

QY 4 LNLLEEVRLYSCTPRNFSVSIREEL-KRTDTIFMPGCLLVKRCGNCACCLHNCNEC-Q 61
DB 70 LKVIDEEMORTQCSPRETCVEVASELGKSTNTFFKPPCVNFRGCG---CCNEESLIGMN 126
QY 62 CVPSKVTKKYHEVLQLRPKTGVRGLHKSITDVALEHHEECDCV 104
DB 127 TSTSYISKOLFETISV--PLTSV---PELVYVKIANHTGCKCL 163

RESULT 4
US-08-915-795-5
Sequence 5, Application US/08915795
Patent No. 6235713
GENERAL INFORMATION:
APPLICANT: Marc G. ACHEN
APPLICANT: Andrew F. WILKS
APPLICANT: Steven A. STACKER
APPLICANT: Karl ALITALO
TITLE OF INVENTION: GROWTH FACTOR
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Evenson, McKeown, Edwards & Lenahan P.L.L.C.
STREET: 1200 G Street, NW, Suite 700
CITY: Washington

RESULT 6
US-08-094-079-3
Sequence 3, Application US/08094079
Patent No. 5515545
GENERAL INFORMATION:
APPLICANT: COOK, Anne L
APPLICANT: CRAIG, Stewart
APPLICANT: CLEMENTS, John M
APPLICANT: EDWARDS, Richard M
APPLICANT: BROWN, David
TITLE OF INVENTION: PDGF-B ANALOGUES
NUMBER OF SEQUENCES: 22
CORRESPONDENCE ADDRESS:
ADDRESSEE: Allegretti & Witcoff, Ltd.
STREET: 10 S. Wacker Dr.
CITY: Chicago
STATE: Illinois
COUNTRY: USA
ZIP: 60606
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/094,079
FILING DATE: 24-JAN-1992
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/GB92/00141
FILING DATE: 24-JAN-1992
PRIOR APPLICATION DATA:

SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/691,794
FILING DATE: 02-AUG-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/002,827
FILING DATE: 25-AUG-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/567,200
FILING DATE: 05-DEC-1995
ATTORNEY/AGENT INFORMATION:
NAME: Dreger, Walter H.
REGISTRATION NUMBER: 24,190
REFERENCE/DOCKET NUMBER: A-63756/WHD
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 109 amino acids
TYPE: amino acid
STRANDEDNESS: unknown
TOPOLOGY: unknown
MOLECULE TYPE: protein
US-08-691-794-4

Query Match 16.9%; Score 105; DB 3; Length 109;
Best Local Similarity 33.3%; Pred. No. 0.00015;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

OY 7 LEEVRLYSCPTPRN--FSVSIREELKRTDIF--WPGCLLYKRCGGACACCLHNCNECCOC 62
DB 7 IAPPMIAECKTREVFEIS--RRLIDRTNANFLWMPVCVEVORCSG---CC--NNRVQC 60
OY 63 VPSKYTKKHYEVQLRP---KTGV---RGLHKSITDVALEHHEECDC 103
DB 61 RPTQV-----QLRPVQYRKIEIVKRPKFIKAT-VTLEDHLACKC 99

RESULT 9
PCT-US91-02766-18
Sequence 18, Application PC/TUS9102766
GENERAL INFORMATION:
APPLICANT: NASCIMENTO, CARLOS G.
APPLICANT: CALDERON-CACIA, MARIA D.
TITLE OF INVENTION: GLYCOSYLATED PDGF
NUMBER OF SEQUENCES: 24
CORRESPONDENCE ADDRESS:
ADDRESSEE: Irell & Manella
STREET: 545 Middlefield Road, Suite 200
CITY: Menlo Park
STATE: California
COUNTRY: USA
ZIP: 94025
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US91/02766
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/515,474
FILING DATE: 26-APR-1990
ATTORNEY/AGENT INFORMATION:
NAME: ROBINS, ROBERTA L.
REGISTRATION NUMBER: 33,208
REFERENCE/DOCKET NUMBER: 2300-0105.40

TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 327-7250
TELEFAX: (415) 327-2951
TELEX: 706141
INFORMATION FOR SEQ ID NO: 18:
SEQUENCE CHARACTERISTICS:
LENGTH: 109 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US91-02766-18

Query Match 16.9%; Score 105; DB 5; Length 109;
Best Local Similarity 33.3%; Pred. No. 0.00015;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

OY 7 LEEVRLYSCPTPRN--FSVSIREELKRTDIF--WPGCLLYKRCGGACACCLHNCNECCOC 62
DB 7 IAPPMIAECKTREVFEIS--RRLIDRTNANFLWMPVCVEVORCSG---CC--NNRVQC 60
OY 63 VPSKYTKKHYEVQLRP---KTGV---RGLHKSITDVALEHHEECDC 103
DB 61 RPTQV-----QLRPVQYRKIEIVKRPKFIKAT-VTLEDHLACKC 99

RESULT 10
PCT-US93-02612-1
Sequence 1, Application PC/TUS9302612
GENERAL INFORMATION:
APPLICANT: Cable, Michael
APPLICANT: Hesson, Thomas
APPLICANT: Mannarino, Anthony
TITLE OF INVENTION: Monomeric Platelet-Derived Growth Factor and Prevention of
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: Schering-Plough Corporation
STREET: One Giralda Farms
CITY: Madison
STATE: New Jersey
COUNTRY: USA
ZIP: 07940
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Apple Macintosh
OPERATING SYSTEM: Macintosh 6.0.5
SOFTWARE: Microsoft Word 4.00B
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/02612
FILING DATE: 19930326
CLASSIFICATION:
PRIOR APPLICATION DATA: None
ATTORNEY/AGENT INFORMATION:
NAME: Lunn, Paul, G.
REGISTRATION NUMBER: 32,743
REFERENCE/DOCKET NUMBER: J80255
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-822-7255
TELEFAX: 201-822-7039
TELEX: 219165
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 109 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: peptide
PCT-US93-02612-1

Query Match 16.9%; Score 105; DB 5; Length 109;
Best Local Similarity 33.3%; Pred. No. 0.00015;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

Oy 7 LEEVRLYSCPRN--FSVSIRELKRDTIF--WPGCLLVKRCGCACCLHNCNECOC 62
Db 7 IAEPMIAECKTRTEVEFIS--RRLIDRTNANFLWPCVEVQRCSG---CC--NNRNVOQC 60
Oy 63 VPSKYTKYHEVLQLRP---KTGV---RGLHKSLTDVALEHNEECDC 103
Db 61 RPTQV-----QLRPQVQKRIEIVRKKPIFKKAT-VTLEDHLACKC 99

RESULT 11
5498600-3
Patent No. 5498600
APPLICANT: MURRAY, MARK J.; KELLY, JAMES D.
TITLE OF INVENTION: BIOLOGICALLY ACTIVE MOSAIC PROTEINS
NUMBER OF SEQUENCES: 34
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/319,776
FILING DATE: 07-OCT-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 926,149
FILING DATE: 05-AUG-1992
APPLICATION NUMBER: 379,239
FILING DATE: 11-JUL-1989
APPLICATION NUMBER: 941,970
FILING DATE: 15-DEC-1986
APPLICATION NUMBER: 896,485
FILING DATE: 3-AUG-1986
APPLICATION NUMBER: 705,175
FILING DATE: 25-FEB-1985
APPLICATION NUMBER: 660,496
FILING DATE: 12-OCT-1984
SEQ ID NO: 3:
LENGTH: 109
5498600-3

Query Match 16.9%; Score 105; DB 6; Length 109;
Best Local Similarity 33.3%; Pred. No. 0.00015;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

Oy 7 LEEVRLYSCPRN--FSVSIRELKRDTIF--WPGCLLVKRCGCACCLHNCNECOC 62
Db 7 IAEPMIAECKTRTEVEFIS--RRLIDRTNANFLWPCVEVQRCSG---CC--NNRNVOQC 60
Oy 63 VPSKYTKYHEVLQLRP---KTGV---RGLHKSLTDVALEHNEECDC 103
Db 61 RPTQV-----QLRPQVQKRIEIVRKKPIFKKAT-VTLEDHLACKC 99

RESULT 12
US-08-257-494D-1
Sequence 1, Application US/08257494D
Patent No. 5863892
GENERAL INFORMATION:
APPLICANT: Allergan, Inc.
TITLE OF INVENTION: USE OF PLATELET
TITLE OF INVENTION: DERIVED GROWTH FACTOR IN OPHTHALMIC
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
ADDRESSEE: Allergan, Inc.
STREET: 2525 Dupont Drive
CITY: Irvine
STATE: California
COUNTRY: USA
ZIP: 92715
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch,
MEDIUM TYPE: 1.40MB storage
COMPUTER: Apple Macintosh II
OPERATING SYSTEM: Macintosh OS 7.1
SOFTWARE: Microsoft Word 5.1a
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/257,494D
FILING DATE: 26 FEB 1992
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: USN
FILING DATE: 26 FEB 1992
ATTORNEY/AGENT INFORMATION:
NAME: Baran, Robert J.
REGISTRATION NUMBER: 25,806
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (714) 246-4249
TELEFAX: (714) 246-4249
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 119 amino acid residues
TYPE: amino acid
STRANDEDNESS:
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-257-494D-1

Query Match 16.9%; Score 105; DB 2; Length 119;
Best Local Similarity 33.3%; Pred. No. 0.00017;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

Oy 7 LEEVRLYSCPRN--FSVSIRELKRDTIF--WPGCLLVKRCGCACCLHNCNECOC 62
Db 7 IAEPMIAECKTRTEVEFIS--RRLIDRTNANFLWPCVEVQRCSG---CC--NNRNVOQC 60
Oy 63 VPSKYTKYHEVLQLRP---KTGV---RGLHKSLTDVALEHNEECDC 103
Db 61 RPTQV-----QLRPQVQKRIEIVRKKPIFKKAT-VTLEDHLACKC 99

RESULT 13
5428135-2
Patent No. 5428135
APPLICANT: LYONS, DAVID E.; THOMASON, ARLEN R.
TITLE OF INVENTION: PRODUCTION OF PLATELET-DERIVED GROWTH
FACTOR B-CHAIN HETERODIMERS FROM HIGH EXPRESSION HOST CELL SYSTEM
NUMBER OF SEQUENCES: 10
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/236,880
FILING DATE: 29-APR-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 623,671
FILING DATE: 12-DEC-1990
APPLICATION NUMBER: 451,485
FILING DATE: 15-DEC-1989
SEQ ID NO: 2:
LENGTH: 120
5428135-2

Query Match 16.9%; Score 105; DB 6; Length 120;
Best Local Similarity 33.3%; Pred. No. 0.00017;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

Oy 7 LEEVRLYSCPRN--FSVSIRELKRDTIF--WPGCLLVKRCGCACCLHNCNECOC 62
Db 8 IAEPMIAECKTRTEVEFIS--RRLIDRTNANFLWPCVEVQRCSG---CC--NNRNVOQC 61
Oy 63 VPSKYTKYHEVLQLRP---KTGV---RGLHKSLTDVALEHNEECDC 103
Db 62 RPTQV-----QLRPQVQKRIEIVRKKPIFKKAT-VTLEDHLACKC 100

RESULT 14
US-08-989-251-2

```
; Sequence 2, Application US/08989251
; Patent No. 6017731
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; TITLE OF INVENTION: PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave. Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/989,251
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 146 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-989-251-2
```

```
Query Match 16.9%; Score 105; DB 3; Length 146;
Best Local Similarity 33.3%; Pred. No. 0.00021;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;
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OY 7 LEEVRLYCTPRN--FVSISREELKRTDTIF--WPGCLLVKRCGNCACCLHNCNECC 62
: : : : : : : : : : : : : : : : : : : : : : : : : :
Db 44 IAEPMIAECKTRTEVEFIS--RLIDRTNANFLWMPCEVEVQRCSG---CC--NNRNVOG 97
: : : : : : : : : : : : : : : : : : : : : : : : : :
OY 63 VPSKYTKKHVEVLQRP---KTGV---RGLHSLTDVALEHHEEDC 103
: : : : : : : : : : : : : : : : : : : : : : : : : :
Db 98 RPTQV-----QLRPQVQRKIEIVRKKPIFKKAT-VTLEDHLAKC 136
: : : : : : : : : : : : : : : : : : : : : : : : : :
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RESULT 15
US-08-989-251-25
; Sequence 25, Application US/08989251
; Patent No. 6017731
; GENERAL INFORMATION:
; APPLICANT: Tekamp-Olson, Patricia
; TITLE OF INVENTION: METHOD FOR EXPRESSION OF HETEROLOGOUS
; TITLE OF INVENTION: PROTEINS IN YEAST
; NUMBER OF SEQUENCES: 41
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Bell Seltzer IP Group of Alston & Bird, LLP
; STREET: 3605 Glenwood Ave. Suite 310
; CITY: Raleigh
; STATE: NC
; COUNTRY: US
; ZIP: 27622
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patentin Release #1.0, Version #1.30
```

```
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/989,251
; FILING DATE:
; CLASSIFICATION:
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5784-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919 420 2202
; TELEFAX: 919 881 3175
; INFORMATION FOR SEQ ID NO: 25:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 146 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-989-251-25
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```
Query Match 16.9%; Score 105; DB 3; Length 146;
Best Local Similarity 33.3%; Pred. No. 0.00021;
Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;
```

```
OY 7 LEEVRLYCTPRN--FVSISREELKRTDTIF--WPGCLLVKRCGNCACCLHNCNECC 62
: : : : : : : : : : : : : : : : : : : : : : : : : :
Db 44 IAEPMIAECKTRTEVEFIS--RLIDRTNANFLWMPCEVEVQRCSG---CC--NNRNVOG 97
: : : : : : : : : : : : : : : : : : : : : : : : : :
OY 63 VPSKYTKKHVEVLQRP---KTGV---RGLHSLTDVALEHHEEDC 103
: : : : : : : : : : : : : : : : : : : : : : : : : :
Db 98 RPTQV-----QLRPQVQRKIEIVRKKPIFKKAT-VTLEDHLAKC 136
: : : : : : : : : : : : : : : : : : : : : : : : : :
```

Search completed: July 3, 2001, 10:29:37
Job time: 237 sec

CC and tissue repair in a subject. The products of the invention are useful
CC for preparing medicaments for treating wounds such as dermal ulcers,
CC pressure sores, venous sores, diabetic ulcers and burns and to promote
CC skin graft growth, tissue repair, proliferation of new blood vessels,
CC tissue regeneration and organ repair by promoting angiogenic activity or
CC vascularization. This sequence represents the human VEGF-X protein
CC isolated from clones 4 and 7 described in the method of the invention.
XX
SQ Sequence 345 AA:

Query Match 100.0%; Score 621; DB 21; Length 345;
Best Local Similarity 100.0%; Pred. No. 4.7e-57;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 VVDNLNLTTEVRLYSCTPRNFSYSIREELKRTDTIFMPGCLLYKRCGNACCLHNCNEC 60
|||||
DB 235 vvdlnllteevrlyscprnfsysireelkrtdtlfpvccllykrcgncacclhncnc 294

OY 61 QCVPSKVTKKYHEVLDLRPKTGVRLKSLTDVLEHHECDVCVCGSTGC 111
|||||
DB 295 qcvpskvtkkyhevlldlrpkgtvrglrlksltdvalhhecdvcrcgstgc 345

RESULT 14
AAB10644
ID AAB10644 standard; Protein: 345 AA.
XX
AC AAB10644;

XX
XX 19-JAN-2001 (first entry)
XX
DE Human VEGF-X protein #4.

XX VEGF-X: vascular endothelial growth factor; human; vulnery; cyrostatic;
XX antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment;
XX angiogenesis regulator; vascularization regulator; cancer; psoriasis;
XX rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair;
XX tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;
XX venous sore; diabetic ulcer; burns; skin graft growth.

XX Homo sapiens.
XX
XX WO200037641-A2.

XX 29-JUN-2000.

XX 21-DEC-1999; 99WO-US30503.

XX 22-DEC-1998; 98GB-0028377.

XX 18-MAR-1999; 99US-0124967.

XX 08-NOV-1999; 99US-0164131.

XX (JANC) JANSSEN PHARM NV.

XX Gordon RD, Sprengel JJ, Von JR, Dijkmans JJH, Goslowska A;

XX Dhanaraj SN, Xu J;

XX WPI: 2000-442669/38.

XX N-PSDB: AAA71990.

XX New vascular endothelial growth factor protein, useful for treating or
XX preventing diseases associated with inappropriate angiogenesis activity
XX such as cancer, rheumatoid arthritis, psoriasis and wounds -
XX
XX Disclosure: Fig 30B; 127pp; English.

XX This invention describes a novel vascular endothelial growth factor-X
XX (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has
XX vulnery, cyrostatic, antirheumatic, antiarthritic, antipsoriatic and
XX antidiabetic activity and acts as an angiogenesis and vascularization
XX regulator. An antisense molecule of the invention is useful for treating
XX or preventing cancer, rheumatoid arthritis, psoriasis and diabetic

CC retinopathy by inhibiting angiogenic activity or inappropriate
CC vascularization including formation and proliferation of new blood
CC vessels, growth and development of tissues, tissue regeneration and organ
CC and tissue repair in a subject. The products of the invention are useful
CC for preparing medicaments for treating wounds such as dermal ulcers,
CC pressure sores, venous sores, diabetic ulcers and burns and to promote
CC skin graft growth, tissue repair, proliferation of new blood vessels,
CC tissue regeneration and organ repair by promoting angiogenic activity or
CC vascularization. This sequence represents a human VEGF-X protein
CC described in the method of the invention.
XX
SQ Sequence 345 AA:

Query Match 100.0%; Score 621; DB 21; Length 345;
Best Local Similarity 100.0%; Pred. No. 4.7e-57;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 VVDNLNLTTEVRLYSCTPRNFSYSIREELKRTDTIFMPGCLLYKRCGNACCLHNCNEC 60
|||||
DB 235 vvdlnllteevrlyscprnfsysireelkrtdtlfpvccllykrcgncacclhncnc 294

OY 61 QCVPSKVTKKYHEVLDLRPKTGVRLKSLTDVLEHHECDVCVCGSTGC 111
|||||
DB 295 qcvpskvtkkyhevlldlrpkgtvrglrlksltdvalhhecdvcrcgstgc 345

RESULT 15
AAB10650
ID AAB10650 standard; Protein: 345 AA.
XX
AC AAB10650;

XX
XX 19-JAN-2001 (first entry)
XX
DE Human 990126vegX protein.

XX VEGF-X: vascular endothelial growth factor; human; vulnery; cyrostatic;
XX antirheumatic; antiarthritic; antipsoriatic; antidiabetic; treatment;
XX angiogenesis regulator; vascularization regulator; cancer; psoriasis;
XX rheumatoid arthritis; diabetic retinopathy; blood vessel; organ repair;
XX tissue regeneration; tissue repair; wound; dermal ulcer; pressure sore;
XX venous sore; diabetic ulcer; burns; skin graft growth.

XX Homo sapiens.
XX
XX WO200037641-A2.

XX 29-JUN-2000.

XX 21-DEC-1999; 99WO-US30503.

XX 22-DEC-1998; 98GB-0028377.

XX 18-MAR-1999; 99US-0124967.

XX 08-NOV-1999; 99US-0164131.

XX (JANC) JANSSEN PHARM NV.

XX Gordon RD, Sprengel JJ, Von JR, Dijkmans JJH, Goslowska A;

XX Dhanaraj SN, Xu J;

XX WPI: 2000-442669/38.

XX New vascular endothelial growth factor protein, useful for treating or
XX preventing diseases associated with inappropriate angiogenesis activity
XX such as cancer, rheumatoid arthritis, psoriasis and wounds -
XX
XX Disclosure: Fig 11; 127pp; English.

XX This invention describes a novel vascular endothelial growth factor-X
XX (VEGF-X) protein (Ia) and its encoding polynucleotide (IIa) which has
XX vulnery, cyrostatic, antirheumatic, antiarthritic, antipsoriatic and
XX antidiabetic activity and acts as an angiogenesis and vascularization

CC regulator. An antisense molecule of the invention is useful for treating
CC or preventing cancer, rheumatoid arthritis, psoriasis and diabetic
CC retinopathy by inhibiting angiogenic activity or inappropriate
CC vascularization including formation and proliferation of new blood
CC vessels, growth and development of tissues, tissue regeneration and organ
CC and tissue repair in a subject. The products of the invention are useful
CC for preparing medicaments for treating wounds such as dermal ulcers,
CC pressure sores, venous sores, diabetic ulcers and burns and to promote
CC skin graft growth, tissue repair, proliferation of new blood vessels,
CC tissue regeneration and organ repair by promoting angiogenic activity or
CC vascularization. This sequence represents the human 990126veg protein
CC used to illustrate the method of the invention.

XX
Sequence 345 AA:

Query Match 100.0%; Score 621; DB 21; Length 345;
Best Local Similarity 100.0%; Pred. NO. 4.7e-57;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 VVDLNLTEEVRLYSCTPRNFSVSIREELKRTDTTFMPGCLVRRGSGNACCLHNCNEC 60
|||
Db 235 vvdnlleevrlyscprnfsvsireelkrtdtlfpqcllvkrsgnaccclhncnec 294
|||
QY 61 QCVPSKVTAKTHIEVQLRPKTVGRLHKS LTDVALEHHECDVCRCGSTGG 111
|||
Db 295 qcvpskvtkkyhevlqrpktgvrghksltdvalehnecdvcrcgstg 345
|||

Search completed: July 3, 2001, 10:29:13
Job time: 313 sec

Db 46 CKPRDTVVYGEESTINQYNPRCTVVKRCSS---CCNDDGICITAVETRTTIVSV 102
OY 75 LQLRPKTGVR-GLHKSLLDVALEHREDCDCRGST 109
Db 103 TGVSSSGTNSGVSTNLRISVTEHTKDCIGRTTT 138

RESULT 2
VEGF_CAVPO STANDARD: PRT: 164 AA.
ID VEGF_CAVPO
AC P26617;
DT 01-AUG-1992 (Rel. 23, Created)
DT 01-AUG-1992 (Rel. 23, Last sequence update)
DT 01-OCT-1996 (Rel. 34, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) (VASCULAR PERMEABILITY FACTOR) (VRF).
GN VEGF.
OS Cavia porcellus (Guinea pig).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Hystriognathi; Caviidae; Cavia.
OX NCBI_TaxId=10141;
RN [1]
RP SEQUENCE FROM N.A.
RA Berse B.;
RL Submitted (XXX-1992) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION AND VASCULAR PERMEABILITY.
CC -1- SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
CC -1- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN (BY SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
CC -----
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CC -----
DR EMBL: M84230; AAA37057.1; -
DR HSSP: P15692; 2VGH.
DR InterPro: IPR000072; -
DR Pfam: PF00341; PDGF_1; 1.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS50278; PDGF_2; 1.
KW Mitogen; Growth factor; Glycoprotein.
FT DISULFID 25 67 BY SIMILARITY.
FT DISULFID 56 101 BY SIMILARITY.
FT DISULFID 60 103 BY SIMILARITY.
FT DISULFID 50 50 INTERCHAIN (BY SIMILARITY).
FT DISULFID 59 59 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 74 74 N-LINKED (GLCNAC...) (POTENTIAL).
SQ SEQUENCE 164 AA; 19330 MW; 9EB86A81A9D5DCA4 CRC64;

Query Match 17.5%: Score 108.5; DB 1; Length 164;
Best Local Similarity 26.5%: Pred. No. 0.00016;
Matches 27; Conservative 21; Mismatches 37; Indels 17; Gaps 5;

OY 9 EEVLYS-----CTPRNFVSISREEL-KRTDTIFWPGCLLVKRCGNCACCLLNCHNECQ 61
Db 12 EEVFMFOVYKRSYCRPIEMLVDFIOEYFDELEYFKSPCVPLMRCG---CC--NDESLP 66
OY 62 CVPSKVTKKYHEVLQLRPKTGVRGLKSLDVALEHREDCDC 103
Db 67 CVPTPEEFNITFMQIRIKRPHQG-----OHIGMSLQSKSCC 103

RESULT 3

PDGF_RABIT STANDARD: PRT: 213 AA.
ID PDGF_RABIT
AC P34007;
DT 01-FEB-1994 (Rel. 28, Created)
DT 01-FEB-1994 (Rel. 28, Last sequence update)
DT 01-OCT-2000 (Rel. 40, Last annotation update)
DE PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN) (PDGF-1).
GN PDGFA.
OS Oryctolagus cuniculus (Rabbit).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OX NCBI_TaxId=9986;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-Vascular smooth muscle;
RX MEDLINE=92246970; PubMed=1575749;
RA Nakamura K.-I., Nishimura H., Kuro-O M., Takewaki S.-I., Iwase M., Ohkubo A., Yazaki Y., Nagai R.;
RT Identification of three types of PDGF-A chain gene transcripts in rabbit vascular smooth muscle and their regulated expression during development and by angiotensin II.*;
RL Biochem. Biophys. Res. Commun. 184:811-818(1992).
CC -1- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
CC -1- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN TRANSFORMATION PROCESSES.
CC -1- ALTERNATIVE PRODUCTS: 3 ISOFORMS; A1, A2 (SHOWN HERE) AND A3; ARE PRODUCED BY ALTERNATIVE SPLICING.
CC -1- INDUCTION: THE FORM A3 IS SELECTIVELY INDUCED BY ANGIOTENSIN II.
CC -1- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-A-B, DIMERS CAN BIND TO THE PDGF RECEPTOR.
CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
CC -----
DR PIR: J50735; J50735.
DR PIR: PS0387; PS0387.
DR PIR: JN0248; JN0248.
DR HSSP: P01127; 1PDG.
DR InterPro: IPR000072; -
DR InterPro: IPR002400; -
DR Pfam: PF00341; PDGF_1; 1.
DR PRINTS: PR00438; GFCYSKNOT.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS50278; PDGF_2; 1.
KW Glycoprotein; Mitogen; Growth factor; Platelet; Alternative splicing.
FT SIGNAL 1 20
FT PROPEP 21 89 BY SIMILARITY.
FT CHAIN 90 213 PLATELET-DERIVED GROWTH FACTOR, A CHAIN.
FT SITE 158 162 RECEPTOR BINDING SITE (POTENTIAL).
FT DISULFID 131 179 BY SIMILARITY.
FT DISULFID 135 181 BY SIMILARITY.
FT DISULFID 125 125 INTERCHAIN (BY SIMILARITY).
FT DISULFID 134 134 INTERCHAIN (BY SIMILARITY).
FT CARBOHYD 136 136 N-LINKED (GLCNAC...) (POTENTIAL).
FT VARSPLIC 196 198 GRR -> DVR (IN ISOFORM A1).
FT VARSPLIC 199 213 MISSING (IN ISOFORM A1).
FT VARSPLIC 197 213 RRRSGKKRRKKRLRFT -> TLLPAPGVHPGCGCLRAHND
SQ SEQUENCE 213 AA; 24005 MW; 28A9B7E50487F4C5 CRC64;

Query Match 17.4%: Score 108; DB 1; Length 213;
Best Local Similarity 32.3%: Pred. No. 0.00023;
Matches 32; Conservative 14; Mismatches 41; Indels 12; Gaps 6;

OY 16 CTPRNFVSIS-REELKRTDTIF--WPGCLLVKRCGNCACCLLNCHNECQCVPSKVTKKYH 72
Db 98 CKRTVYIETIPRQVDPSTANFLIPPCVEVKRCG---CC--NTSSVKQPSRVR---HH 149

DB	150	RSVKAKVEYRKRR-LKEVOYRLEEHLECAASSAG	187
oy	73	EVLOLRPKTVGGLKSLTDVALLEHHEEDSCYRSTGC	111
	---	---	---
Db	150	RSVKAKVEYRKRR-LKEVOYRLEEHLECAASSAG	187
RESULT	4		
VEGB_HUMAN			
ID	VEGB_HUMAN	STANDARD:	PRT: 188 AA.
AC	P49765		
DT	01-OCT-1996 (Rel. 34, Created)		
DT	01-OCT-1996 (Rel. 34, Last sequence update)		
DT	01-OCT-2000 (Rel. 40, Last annotation update)		
DE	VASCULAR ENDOTHELIAL GROWTH FACTOR B PRECURSOR (VEGF-B) (VEGF RELATED FACTOR).		
GN	VEGFB OR VRF.		
OS	Homo sapiens (Human).		
OC	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;		
OC	Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.		
OX	NCBI_TaxId:9606;		
RP	[1]		
RP	SEQUENCE FROM N.A.		
RX	MEDLINE-96197335; PubMed-6637916;		
RX	Olofsson B., Pajusola K., Kaipainen A., von Euler G., Joukov V.,		
RA	Saksela O., Orpana A., Petersen R.F., Alltalo K., Eriksson U.,		
RT	"Vascular endothelial growth factor B, a novel growth factor for		
RT	endothelial cells".		
RL	Proc. Natl. Acad. Sci. U.S.A. 93:2576-2581(1996).		
RN	[2]		
RP	SEQUENCE FROM N.A.		
RX	MEDLINE-97077124; PubMed-8919691;		
RA	Grimmond S., Lagercrantz J., Drinkwater C., Sillins G., Townson S.,		
RA	Pollock P., Gotley D., Carson E., Rakar S., Nordenskjold M., Ward L.,		
RA	Hayward N., Weber G.;		
RT	"Cloning and characterization of a novel human gene related to		
RT	vascular endothelial growth factor".		
RL	Genome Res. 6:124-131(1996).		
CC	-1- FUNCTION: GROWTH FACTOR FOR ENDOTHELIAL CELLS. BINDS HEPARIN.		
CC	-1- SUBUNIT: HOMODIMER, DISULFIDE-LINKED. CAN ALSO FORM HETERODIMER		
CC	WITH VEGF.		
CC	-1- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR		
CC	TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN.		
CC	-1- TISSUE SPECIFICITY: EXPRESSED IN ALL TISSUES EXCEPT LIVER.		
CC	HIGHEST LEVELS FOUND IN HEART, SKELETAL MUSCLE AND PANCREAS.		
CC	-1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.		
CC	-----		
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CC	or send an email to license@sib-sib.ch).		
CC	-----		
DR	EMBL; U48801; AAB06274.1; -		
DR	EMBL; U43369; AAA91463.1; -		
DR	HSSP; P15692; 1VPE.		
DR	MIM; 601398; -		
DR	InterPro: IPR000072; -		
DR	Pfam; PF00341; PDGF_1; -		
DR	PROSITE; PS00249; PDGF_1; 1.		
DR	PROSITE; PS0278; PDGF_2; 1.		
KW	Mitogen; Growth factor; Signal; Heparin-binding.		
FT	SIGNAL	1	21
FT	CHAIN	22	188
FT	SEQUENCE	188 AA; 21261 MW; F04634D53721194 CRC64;	
			VASCULAR ENDOTHELIAL GROWTH FACTOR B.

Query Match	16.9%	Score 105	DB 1	Length 188
Best Local Similarity	30.0%	Pred. No.	0.00042	
Matches	27	Conservative	17	Mismatches 34
				Indels 12
				Gaps 4
07	15	SCPTNFVSINDELKRT-DTIFPGCLLYKRCGGACACCLINCLNCCQVPSKYKKYHE	73	

```

Db      46   TCGPREVVVPLTVELMGVAVAKQLVPSCVTYQACGG---CCPD--DGLECVPTGQHVRMQ 100
Oy      74   VLQRPKKTGVNGLKSLTDVALENHHEBCD 103
       :|:|:| |::||| |::|||
Db     101   ILMIRYPS-----SOLGEMSLFEHSOCCEC 124

RESULT      5
PDGA_XENLA  STANDARD;          PRT:    226 AA.
AC      PI398;
DT      01-JAN-1990 (Rel. 13, Created)
DT      01-JAN-1990 (Rel. 13, Last sequence update)
DT      01-OCT-2000 (Rel. 40, Last annotation update)
DE      PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)
        (PDGFA).
OS      Xenopus laevis (African clawed frog).
OC      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
        Amphibia; Batrachia; Anura; Mesobatrachia; Pipidoidea; Pipidae;
        Xenopodinae; Xenopus.
OX      NCBI_TaxID=8355;
RN      [1]
RP      SEQUENCE FROM N.A.
RC      TISSUE=Oocyte;
RX      MEDLINE=88321676; PubMed=3413486;
RA      Mercola M., Melton D.A., Sillies C.D.;
RT      "Platelet-derived growth factor A chain is maternally encoded in
RL      xenopus embryos.";
RN      [2]
RP      SEQUENCE FROM N.A.
RC      TISSUE=Oocyte;
RX      MEDLINE=90175018; PubMed=2308861;
RA      Bejcek B.E., Li D.Y., Deuel T.F.;
RT      "Nucleotide sequence of a cDNA clone of Xenopus platelet-derived
RL      growth factor A-chain.";
RN      [3]
RP      Nucleic Acids Res. 18:680-680(1990).
CC      -1- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR
        CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS
        AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS
        RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE
        IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
        -1- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A
        AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
        TRANSFORMATION PROCESSES.
        -1- ALTERNATIVE PRODUCTS: 2 ISOFORMS: A LONG FORM (SHOWN HERE) AND A
        SHORT FORM: ARE PRODUCED BY ALTERNATIVE SPLICING. THE LONG FORM
        CONTAINS A BASIC INSERT WHICH ACTS AS A CELL RETENTION SIGNAL.
        -1- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE
        PDGF RECEPTOR.
        -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
        CC      This SWISS-PROT entry is copyright. It is produced through a collaboration
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        CC      or send an email to license@isb-sib.ch).
        -----
DR      EMBL; M23237; AAA49927.1; -
DR      EMBL; M23238; AAA49928.1; -
DR      EMBL; X17545; CA35583.1; -
DR      PIR; S08220; S08220.
DR      HSSP; P01127; IPDG.
DR      InterPro; IPR000072; -
DR      InterPro; IPR002400; -
DR      Pfam; PF00341; PDGF; 1.
DR      PRINTS; PR00438; GFCSKNOT.
DR      PROSITE; PS00249; PDGF_1; 1.
DR      PROSITE; PS50278; PDGF_2; 1.
KW      Glycoprotein; Mitogen; Growth factor; Platelet; Alternative splicing;
        Signal.

```

DR Pfam; PF00341; PDGF_1
DR PRINTS; PRO0438; GRCYSKNOT.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS50278; PDGF_2; 1.
KW Glycoprotein; Mitogen; Growth factor; Platelet; Alternative splicing;
Signal.

FT	SIGNAL	1	22	
FT	PROPEP	23	91	REMOVED BY PROTEOLYSIS.
FT	CHAIN	92	226	PLATELET-DERIVED GROWTH FACTOR, A CHAIN.
FT	DISULFID	101	145	BY SIMILARITY.
FT	DISULFID	134	182	BY SIMILARITY.
FT	DISULFID	138	184	BY SIMILARITY.
FT	DISULFID	128	184	INTERCHAIN (BY SIMILARITY).
FT	DISULFID	137	137	INTERCHAIN (BY SIMILARITY).
FT	CARBOHYD	139	139	N-LINKED (GLCNAC. . .) (PROBABLE).
FT	VASAPPLIC	198	200	GFF -> DVR (IN SHORT ISOFORM).
FT	VASAPPLIC	201	226	MISSING (IN SHORT ISOFORM).
FT	CONFLICT	199	209	MISSING (IN REF. 2).
FT	CONFLICT	218	218	O -> R (IN REF. 2).
SO	SEQUENCE	226 AA;	25719 MW;	E3E724FCF67C2FB2 CXC64;
	Query Match	16.94;	Score 105;	DB 1; Length 226;
	Best Local Similarity	31.44;	Pred. No. 0.00051;	
	Matches 33;	Conservative 14;	Mismatches 32;	Indels 26; Gaps 8;
OY	16	CTPRFHSVSI-REELKRPDTIF--WPGCLLVKRCGCGNACCLHNCNEOCVCSKTKKYN	72	
Db	101	CKTRVYVEIPRSQIDPNSANFLMPCEVVKRCGTG---CC--NMSVVKCQPSRI---HH	152	
OY	73	-----EVLQLRPKTGVRCGLHKSLSLTVALEHNEHCDCVCACGST	109	
Db	153	RSVKAKVKEVYRKRPK-----LKEVLV--VRLEEHLECTGTANSNS	190	
RESULT	6			
PDGB_HUMAN	STANDARD:	PRT:	241 AA.	
ID	PDGB_HUMAN			
AC	P01127; P78431;			
DT	21-JUL-1986 (Rel. 01, Created)			
DT	21-JUL-1986 (Rel. 01, Last sequence update)			
DT	01-OCT-2000 (Rel. 40, Last annotation update)			
DE	PLATELET-DERIVED GROWTH FACTOR, B CHAIN PRECURSOR (PDGF B-CHAIN)			
DE	(PDGF-2) (C-SIS) (BECAPLERMIN).			
GN	PDGFB OR SIS.			
OS	Homo sapiens (Human).			
OC	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.			
OX	NCBI_TaxID=9606;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=84250225; PubMed=6740330;			
RA	Josephs S.F., Ratner L., Clarke M.F., Westin E.H., Reitz M.S.,			
RT	Wong-Staal F.;			
RT	"Transforming potential of human c-sis nucleotide sequences encoding			
RT	platelet-derived growth factor.";			
RL	Science 225:636-639(1984).			
RN	[2]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=86205961; PubMed=3517869;			
RA	Rao C.D., Igarashi H., Chiu I.-M., Robbins K.C., Aaronson S.A.;			
RT	"Structure and sequence of the human c-sis/platelet-derived growth			
RT	factor 2 (SIS/PDGF2) transcriptional unit";			
RL	Proc. Natl. Acad. Sci. U.S.A. 83:2392-2396(1986).			
RN	[3]			
RP	SEQUENCE OF 22-241 FROM N.A.			
RX	MEDLINE=84205633; PubMed=6327048;			
RA	Chiu I.-M., Reddy E.P., Givol D., Robbins K.C., Tronick S.R.,			
RA	Aaronson S.A.;			
RT	"Nucleotide sequence analysis identifies the human c-sis			
RT	proto-oncogene as a structural gene for platelet-derived growth			
RT	factor.";			
RL	Cell 37:123-129(1984).			
RN	[4]			
RP	SEQUENCE FROM N.A.			
RX	MEDLINE=85296313; PubMed=4033772;			
RA	Collins T., Ginsburg D., Boss J.M., Orkin S.H., Pober J.S.;			
RT	"Cultured human endothelial cells express platelet-derived growth			
RT	factor B chain: cDNA cloning and structural analysis.";			

RN Nature 316:748-750(1985).
 RP [5]
 RA SEQUENCE FROM N.A.
 RX MEDLINE=85269623; PubMed=2991848;
 RA Ratner L., Josephs S.F., Jarrett R., Reitz M.S., Wong-Staal F.;
 RT "Nucleotide sequence of transforming human c-sis cDNA clones with
 RT homology to platelet-derived growth factor";
 RL Nucleic Acids Res. 13:5007-5016(1985).
 RN [6]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=87217119; PubMed=3472769;
 RA Rao C.D., Jaisrshi H., Pech M.W., Robbins K.C., Aaronson S.A.;
 RT "Oncogenic potential of the human platelet-derived growth factor
 RT transcriptional unit";
 RL Cold Spring Hard. Symp. Quant. Biol. 51:959-966(1986).
 RN [7]
 RP SEQUENCE FROM N.A.
 RA Burgess J., Odell C.;
 RL Submitted (OCT-1996) to the EMBL/Genbank/DBJ databases.
 RN [8]
 RP SEQUENCE OF 1-53 FROM N.A.
 RX MEDLINE=97141927; PubMed=8968177;
 RA Simon M.-P., Pedetour F., Silvent N., Grosgeorge J., Minioletti F.,
 RA Colinde J.-M., Terrier-Lacombe M.-J., Mandahl N., Craver R.D.,
 RA Blin N., Sozzi G., Turc-Carel C., O'Brien K.P., Kedra D.,
 RA Fransson I., Gullbaud C., Dumanski J.P.;
 RT "Regulation of the platelet-derived growth factor B-chain gene via
 RT fusion with collagen gene COL1A1 in dermatofibrosarcoma protuberans
 RT and giant-cell fibroblastoma";
 RL Nat. Genet. 15:95-98(1997).
 RN [9]
 RP SEQUENCE OF 26-241 FROM N.A.
 RX MEDLINE=86164981; PubMed=3456904;
 RA Welch H.A., Sebald W., Schairer H.U., Hoppe J.;
 RT "The human osteosarcoma cell line U-2 OS expresses a 3.8 kilobase
 RT mRNA which codes for the sequence of the PDGF-B chain.";
 RL FEBS Lett. 198:344-348(1986).
 RN [10]
 RP SEQUENCE OF 153-200 FROM N.A., AND PARTIAL SEQUENCE.
 RX MEDLINE=84236121; PubMed=6329745;
 RA Jonsson A., Heldin C.H., Westerman A., Westerman B., Denel T.F.,
 RA Huang J.S., Seeburg P.H., Gray A., Ullrich A., Scrae G.,
 RA Stroobant P., Waterfield M.D.;
 RT "The c-sis gene encodes a precursor of the B chain of
 RT platelet-derived growth factor";
 RL EMBO J. 3:921-928(1984).
 RN [11]
 RP SEQUENCE OF 82-110.
 RX MEDLINE=83197379; PubMed=6844921;
 RA Antoniadou H.N., Hunkapiller M.W.;
 RT "Human platelet-derived growth factor (PDGF): amino-terminal amino
 RT acid sequence";
 RL Science 220:963-965(1983).
 RN [12]
 RP SEQUENCE OF 82-112.
 RX MEDLINE=83244981; PubMed=6306471;
 RA Waterfield M.D., Scrae G.T., Whittle N., Stroobant P., Johnson A.,
 RA Westerman A., Westerman B., Heldin C.H., Huang J.S., Denel T.F.;
 RT "Platelet-derived growth factor is structurally related to the
 RT putative transforming protein p28sis of simian sarcoma virus";
 RL Nature 304:35-39(1983).
 RN [13]
 RP MUTAGENESIS, & IMPORTANCE OF ARG-108 AND ILE-111 FOR RECEPTOR-BINDING.
 RX MEDLINE=92097530; PubMed=1661670;
 RA Clements J.M., Bawden L.J., Bloxidge R.E., Catlin G., Cook A.L.,
 RA Craig S., Drummond A.H., Edwards R.M., Fallon A., Green D.R.,
 RA Hellewell P.G., Kirwin P.M., Nagae P.D., Richardson S.J., Brown D.,
 RA Chelwala S.B., Shaney M.P., Winslow D.;
 RT "Two PDGF-B chain residues, arginine 27 and isoleucine 30, mediate
 RT receptor binding and activation.";
 RL EMBO J. 10:4113-4120(1991).
 RN [14]
 RP INTERCHAIN DISULFIDE BONDS.

RX MEDLINE-92283833: PubMed-1317862;
 RA Andersson M., Oestman A., Backstrom G., Hellman U.,
 RA George-Nascimento C., Westmark B., Helden C.-H.;
 RT "Assignment of interchain disulfide bonds in platelet-derived growth
 RT factor (PDGF) and evidence for agonist activity of monomeric PDGF";
 RL J. Biol. Chem. 267:11260-11266(1992).
 RN (15)
 RP X-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS).
 RX MEDLINE-93010987: PubMed-1396586;
 RA Oefner C., D'Arcy A., Winkler F.K., Eggmann B., Hosang M.;
 RT "Crystal structure of human platelet-derived growth factor BB";
 RL EMBO J. 11:3921-3926(1992).
 CC -1- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR
 CC CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS
 CC AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS
 CC RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE
 CC IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
 CC -1- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A
 CC AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
 CC TRANSFORMATION PROCESSES.
 CC -1- PHARMACEUTICAL: AVAILABLE UNDER THE NAME REGRANEX (ORTHO-MCNEIL).
 CC USED TO PROMOTE HEALING IN DIABETIC NEUROPATHIC FOOT ULCERS.
 CC -1- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE
 CC PDGF RECEPTOR.
 CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
 CC -1- DATABASE: NAME-R&D systems' cytokine source book;
 CC WWW="http://www.rndsystems.com/cyl.cat/pdgr.html".
 CC -1- DATABASE: NAME-Regranex: NOTE-Clinical information on Regranex;
 CC WWW="http://www.regranex.com/".
 CC -----
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 CC -----
 DR EMBL: K01401: AAA60552.1: -
 DR EMBL: K01918: AAA60552.1: JOINED.
 DR EMBL: J00121: AAA60552.1: JOINED.
 DR EMBL: K01398: AAA60552.1: JOINED.
 DR EMBL: K01399: AAA60552.1: JOINED.
 DR EMBL: K01400: AAA60552.1: JOINED.
 DR EMBL: X02811: CAA26579.1: -
 DR EMBL: M12783: AAA60553.1: -
 DR EMBL: X02744: CAA26524.1: -
 DR EMBL: K01917: AAA88793.1: -
 DR EMBL: K01913: AAA88793.1: JOINED.
 DR EMBL: K01914: AAA88793.1: JOINED.
 DR EMBL: K01915: AAA88793.1: JOINED.
 DR EMBL: K01916: AAA88793.1: JOINED.
 DR EMBL: X03702: CAA27333.1: -
 DR EMBL: Z81010: CAB02635.1: -
 DR EMBL: X00561: CAA25228.1: -
 DR EMBL: X00561: CAA25229.1: -
 DR EMBL: X98706: CAA67262.1: -
 DR PIR: A94276: PFHUG2.
 DR PDB: 1PDC: 31-JAN-94.
 DR MIM: 190040: -
 DR InterPro: IPR000072: -
 DR Pfam: PF00341: PDGF_1.
 DR PRINTS: PR00438: GRCYSKNOT.
 DR PROSITE: PS00249: PDGF_1; 1.
 DR PROSITE: PS00278: PDGF_2; 1.
 KM Mitogen: Growth factor: Proto-oncogene: Platelet: signal;
 KM Pharmaceutical: 3D-structure.
 FT SIGNAL 1 20
 FT PROPEP 21 81
 FT CHAIN 82 190 PLATELET-DERIVED GROWTH FACTOR, B CHAIN.
 FT PROPEP 191 241
 FT SITE 108 108 INVOLVED IN RECEPTOR BINDING.

FT SITE 111 111 INVOLVED IN RECEPTOR BINDING.
 FT DISULFID 97 141
 FT DISULFID 130 178
 FT DISULFID 134 180
 FT DISULFID 124 124
 FT DISULFID 133 133
 FT DISULFID 133 133
 FT CONFLICT 21 21
 FT CONFLICT 101 101
 FT CONFLICT 105 105
 FT CONFLICT 107 107
 FT STRAND 90 91
 FT STRAND 94 94
 Query Match 16.9%; Score 105; DB 1; Length 241;
 Best Local Similarity 33.3%; Pred. No. 0.00054;
 Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;
 OY 7 LTEEVLYSTPRN--FVSISREELKRTDIF--WQCCLLYKRCGNCACCLHNCDC 62
 DB 88 IAEPMIAECKTREVFEIS-RRLIDRTNANFLWPPCVCEVQCSG---CC--NNRNVOG 141
 OY 63 VPSKYTKKYHEVLQLRP---KRGV---RGLHKSLTDVALEHHECDC 103
 DB 142 RPTQV-----QLRPVQKRIEYRKPIFKKAT-VTLEDHLACK 180
 RESULT 7
 ID PDGB.FELCA STANDARD; PRT: 245 AA.
 AC P12919;
 DT 01-OCT-1989 (Rel. 12, Created)
 DT 01-OCT-1989 (Rel. 12, Last sequence update)
 DT 01-OCT-2000 (Rel. 40, Last annotation update)
 DE PLATELET-DERIVED GROWTH FACTOR, B CHAIN PRECURSOR (PDGF-B-CHAIN)
 DE (PDGB) (C-SIS) (PDGF-2).
 GN PDGB OR SIS.
 OS Fells silvestris catus (Cat).
 OC Eukaryota; Metazoa; Chordata; Craniala; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Carnivora; Fissipedia; Felidae; Fells.
 OX NCBI_TaxID=9685;
 RN (1)
 RP SEQUENCE FROM N.A.
 RX MEDLINE-87146463: PubMed-3822831;
 RA van den Ouweland A.M.W., van Groningen J.J.M., Schalken J.A.,
 RA van Neck H.W., Bloemers H.P.J., van de Ven W.J.M.;
 RT "Genetic organization of the c-sis transcription unit";
 RL Nucleic Acids Res. 15:959-970(1987).
 RN (2)
 RP REVISIONS.
 RA van den Ouweland A.M.W.;
 RL Submitted (NOV-1996) to the EMBL/GenBank/DBJ databases.
 CC -1- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR
 CC CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS
 CC AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS
 CC RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE
 CC IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
 CC -1- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A
 CC AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
 CC TRANSFORMATION PROCESSES.
 CC -1- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE
 CC PDGF RECEPTOR.
 CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
 CC -----
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 CC or send an email to license@isb-sib.ch).
 CC -----
 DR EMBL: X05112: CAA28758.1: ALT-SEQ.
 DR PIR: A26402: TVCTSS.

DR HSSP; P01127; 1PDG.
 DR InterPro: IPR000072; -
 DR InterPro: IPR002400; -
 DR Pfam: PF00341; PDGF_1.
 DR PRINTS: PR00438; GRCYSKNOT.
 DR PROSITE: PS00249; PDGF_1; 1.
 DR PROSITE: PS50278; PDGF_2; 1.
 KM Mitogen: Growth factor; Proto-oncogene; Platelet; signal.
 FT SIGNAL 1 20
 FT PROPEP 21 81
 FT CHAIN 82 194 PLATELET-DERIVED GROWTH FACTOR, B CHAIN.
 FT PROPEP 195 245
 FT DISULFID 101 145 BY SIMILARITY.
 FT DISULFID 134 182 BY SIMILARITY.
 FT DISULFID 138 184 BY SIMILARITY.
 FT DISULFID 128 128 INTERCHAIN (BY SIMILARITY).
 FT DISULFID 137 137 INTERCHAIN (BY SIMILARITY).
 SQ SEQUENCE 243 AA; 27787 MW; E7715291D9837512 CRC64;

Query Match 16.9%; Score 105; DB 1; Length 245;
 Best Local Similarity 33.0%; Pred. No. 0.00055;
 Matches 35; Conservative 13; Mismatches 36; Indels 22; Gaps 8;

OY 7 LEEVRLVSCPTPRN--FSVSIREELKRTDTIF--WPGCLLVKRCGNCACGLHNCNECQC 62
 DB 92 VAEPAMIAECKTRTEVEFVS--RLIDRTNANFLVWPCEVEYQRCG---CC--NNRNYQC 145
 OY 63 VPSKTKKY-----HEVQLRPKRGVRLHKSITDVALEHHEECDC 103
 DB 146 RPTOVQLRVLYOVRIEYKRKP-----VFKKAT-VTLEDHLACKC 184

RESULT 8
 VEGF_HUMAN STANDARD; PRT: 215 AA.
 AC P15692;
 DT 01-APR-1990 (Rel. 14, Created)
 DT 01-APR-1990 (Rel. 14, Last sequence update)
 DT 15-JUL-1999 (Rel. 38, Last annotation update)
 DE VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR (VEGF) (VASCULAR PERMEABILITY FACTOR) (VPF).
 GN VEGF OR VEGFA.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominiidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Leung D.W., Cachianes G., Kiang W.-J., Goeddel D.V., Ferrara N.;
 RT "Vascular endothelial growth factor is a secreted angiogenic mitogen.";
 RL Science 246:1306-1309(1989).
 RN [2]
 RP SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
 RA MEDLINE-90069609; Pubmed-2479987;
 RA Keck P.J., Hauser S.D., Krivi G., Sanzo K., Warren T., Feder J., Connolly D.T.;
 RT "Vascular permeability factor, an endothelial cell mitogen related to PDGF.";
 RL Science 246:1309-1312(1989).
 RN [3]
 RP SEQUENCE FROM N.A.
 RA MEDLINE-91268072; Pubmed-1711045;
 RA Tischer E., Mitchell R., Hartman T., Silva M., Gospodarowicz D., Fiddes J.C., Abraham J.A.;
 RT "The human gene for vascular endothelial growth factor. Multiple protein forms are encoded through alternative exon splicing.";
 RL J. Biol. Chem. 266:11947-11954(1991).
 RN [4]
 RP SEQUENCE FROM N.A.
 RA MEDLINE-92231879; Pubmed-1567395;

RA Weindel K., Marne D., Welch H.A.;
 RT "AIDS-associated Kaposi's sarcoma cells in culture express vascular endothelial growth factor.";
 RL Biochem. Biophys. Res. Commun. 183:1167-1174(1992).
 RN [5]
 RP PRELIMINARY SEQUENCE OF 27-36; 43-50 AND 59-81.
 RX MEDLINE-90062112; Pubmed-2584205;
 RA Connolly D.T., Olander J.V., Heuvelman D., Nelson R., Monsell R., Siegel N., Haymer B.L., Leimgruber R., Feder J.;
 RT "Human vascular permeability factor. Isolation from U937 cells.";
 RL Eur. J. Biochem. 264:20017-20024(1989).
 RN [6]
 RP SEQUENCE OF 27-41.
 RX MEDLINE-93145946; Pubmed-7678805;
 RA Fleiblich B.L., Jaeger B., Schoellman C., Weindel K., Witting J., Kochs G., Marne D., Hug H., Welch H.A.;
 RT "Synthesis and assembly of functionally active human vascular endothelial growth factor homodimers in insect cells.";
 RL Eur. J. Biochem. 211:19-26(1993).
 RN [7]
 RP X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS) OF 34-135.
 RX MEDLINE-97352774; Pubmed-9207067;
 RA Muller Y.A., Li B., Christinger H.W., Wells J.A., Cunningham B.C., de Vos A.M.;
 RT "Vascular endothelial growth factor: crystal structure and functional mapping of the kinase domain receptor binding site.";
 RL Proc. Natl. Acad. Sci. U.S.A. 94:7192-7197(1997).
 RN [8]
 RP X-RAY CRYSTALLOGRAPHY (1.93 ANGSTROMS) OF 34-135.
 RX MEDLINE-98035455; Pubmed-9351807;
 RA Muller Y.A., Christinger H.W., Keyt B.A., de Vos A.M.;
 RT "The crystal structure of vascular endothelial growth factor (VEGF) refined to 1.93-A resolution: multiple copy flexibility and receptor binding.";
 RL Structure 5:1325-1338(1997).
 RN [9]
 RP X-RAY CRYSTALLOGRAPHY (1.9 ANGSTROMS) OF 39-134.
 RX MEDLINE-99119204; Pubmed-9922142;
 RA Wlesmann C., Christinger H.W., Cochran A.G., Cunningham B.C., Fairbrother W.J., Keenan C.J., Meng G., de Vos A.M.;
 RT "Crystal structure of the complex between VEGF and a receptor-blocking peptide.";
 RL Biochemistry 37:17765-17772(1998).
 RN [10]
 RP STRUCTURE BY NMR OF 34-135.
 RX MEDLINE-97477915; Pubmed-9336848;
 RA Fairbrother W.J., Champe M.A., Christinger H.W., Keyt B.A., Starovasnik M.A.;
 RT "1H, 13C, and 15N backbone assignment and secondary structure of the receptor-binding domain of vascular endothelial growth factor.";
 RL Protein Sci. 6:2250-2260(1997).
 RN [11]
 RP STRUCTURE BY NMR OF 137-215.
 RX MEDLINE-98298440; Pubmed-9634701;
 RA Fairbrother W.J., Champe M.A., Christinger H.W., Keyt B.A., Starovasnik M.A.;
 RT "Solution structure of the heparin-binding domain of vascular endothelial growth factor.";
 RL Structure 6:637-648(1998).
 CC -!- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION AND VASCULAR PERMEABILITY.
 CC -!- SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
 CC -!- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN (BY SIMILARITY).
 CC -!- ALTERNATIVE PRODUCTS: FOUR FORMS OF VEGF ARE PRODUCED BY ALTERNATIVE SPLICING OF THE SAME GENE (VEGF-121, VEGF-165, VEGF-189 AND VEGF-215).
 CC -!- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
 CC -----
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DR PROSITE: PS50278; PDGF_2; 1.
 KW Glycoprotein; Mitogen; Growth factor; Platelet; alternative splicing;
 FT SIGNAL 1 20 BY SIMILARITY.
 FT PROPEP 21 85 REMOVED BY PROTEOLYSIS.
 FT CHAIN 86 204 PLATELET-DERIVED GROWTH FACTOR, A CHAIN.
 FT SITE 158 162 RECEPTOR BINDING SITE (POTENTIAL).
 FT DISULFID 96 140 BY SIMILARITY.
 FT DISULFID 129 177 BY SIMILARITY.
 FT DISULFID 133 179 BY SIMILARITY.
 FT DISULFID 123 123 INTERCHAIN (BY SIMILARITY).
 FT DISULFID 132 132 INTERCHAIN (BY SIMILARITY).
 FT CARBOHYD 134 134 N-LINKED (GLCNAC. . .) (BY SIMILARITY).
 FT VARSPLIC 194 196 GRR -> DVR (IN SHORT ISOFORM).
 FT VARSPLIC 197 204 MISSING (IN SHORT ISOFORM).
 FT CONFLICT 85 111 KRISLEAPVACRTYVEIPRSQVD -> REVLKRPFQ
 FT CONFLICT 119 119 FARGRSTRYLGAWT (IN REF. 2).
 FT CONFLICT 119 119 I -> T (IN REF. 3).
 SO SEQUENCE 204 AA: 23307 MW: FA413F74E86F742C CRC64:
 Query Match 16.7%; Score 104; DB 1; Length 204;
 Best Local Similarity 34.0%; Pred. No. 0.00058;
 Matches 32; Conservative 12; Mismatches 34; Indels 16; Gaps 6:
 OY 16 CTRPNFVSIV-REELKRTDTIF--WPGCLLYKRCGCGNACCLHNCNOCQVPSKV---TK 69
 DB 96 CKTRVIVEIPRSQVDPSANFLIMPCEVVEVRCGTG---CC--NTSSVAKCPSRVHHRSV 150
 OY 70 KYHEVLQLRPKTGVGRLKSLDLVALHEHBCDC 103
 DB 151 KVAKEVYVRKKRKEV-----QVRLLEHLBCAC 179
 RESULT 10
 PGCA_HUMAN
 ID PGCA_HUMAN STANDARD: PRT: 211 AA.
 AC P04085.
 DT 01-NOV-1986 (Rel. 03, Created)
 DT 01-NOV-1986 (Rel. 03, Last sequence update)
 DT 01-OCT-2000 (Rel. 40, Last annotation update)
 DE PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)
 DE (PDGF-1).
 GN PDGFA.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 CC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
 CX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=88144463; PubMed=3422746;
 RA Bonthron D.T., Morton C.C., Orkin S.H., Collins T.;
 RT "Platelet-derived growth factor A chain: gene structure, chromosomal
 location, and basis for alternative mRNA splicing.";
 RL Proc. Natl. Acad. Sci. U.S.A. 85:1492-1496(1988).
 RN [2]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=88174698; PubMed=2832727;
 RA Rostman F., Bywater M., Knott T.J., Scott J., Betscholtz C.;
 RT "Structural characterization of the human platelet-derived growth
 factor A-chain cDNA and gene: alternative exon usage predicts two
 RT different precursor proteins.";
 RL Mol. Cell. Biol. 8:571-577(1988).
 RN [3]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=86203630; PubMed=3754619;
 RA Besholtz C., Johansson A., Heldin C.H., Westermarck B., Lind P.,
 RA Ureba M.S., Eddy R., Shows T.B., Philpott K., Mellor A.L., Knott T.J.,
 RA Scott J.;
 RT "cDNA sequence and chromosomal localization of human platelet-derived
 RT growth factor A-chain and its expression in tumour cell lines.";
 RL Nature 320:695-699(1986).
 RN [4]

RP SEQUENCE FROM N.A.
 RX MEDLINE=88030061; PubMed=3666150;
 RA Hoppe J., Schumacher L., Eichner W., Welch H.A.;
 RT "The long 3'-untranslated regions of the PDGF-A and -B mRNAs are only
 RT distantly related.";
 RL FEBS Lett. 223:243-246(1987).
 RN [5]
 RP SEQUENCE OF 1-53 FROM N.A.
 RX MEDLINE=93252628; PubMed=8486521;
 RA Takimoto Y., Li W.Y., Wang Z.Y., Tong B.D., Deuel T.F.;
 RT "Nucleotide sequence of the 5' region of the human platelet-derived
 RT growth factor A-chain gene.";
 RL Hiroshima J. Med. Sci. 42:47-52(1993).
 RN [6]
 RP ALTERNATIVE SPLICING.
 RX MEDLINE=87287247; PubMed=3614363;
 RA Tong B.D., Auer D.E., Jaje M., Kaplow J.M., Ricca G., McConathy E.,
 RA Dronan W., Deuel T.F.;
 RT "cDNA clones reveal differences between human glial and endothelial
 RT cell platelet-derived growth factor A-chains.";
 RL Nature 328:619-621(1987).
 RN [7]
 RP ALTERNATIVE SPLICING.
 RX MEDLINE=87287248; PubMed=3614364;
 RA Collins T., Bonthron D.T., Orkin S.H.;
 RT "Alternative RNA splicing affects function of encoded platelet-derived
 RT growth factor A chain.";
 RL Nature 328:621-624(1987).
 RN [8]
 RP INTERCHAIN DISULFIDE BONDS.
 RX MEDLINE=92283833; PubMed=3317862;
 RA Andersson W., Oestman A., Baekstroem G., Hellman U.,
 RA George-Nascimento C., Westermarck B., Heldin C.-H.;
 RT "Assignment of interchain disulfide bonds in platelet-derived growth
 RT factor (PDGF) and evidence for agonist activity of monomeric PDGF.";
 RL J. Biol. Chem. 267:11260-11266(1992).
 CC -I- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR
 CC CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS
 CC AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS
 CC RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE
 CC IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEAL THE WOUND.
 CC -I- SUBUNIT: ANTI-PAALLEL, DISULFIDE-LINKED DIMER OF NONIDENTICAL (A
 CC AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
 CC TRANSFORMATION PROCESSES.
 CC -I- ALTERNATIVE PRODUCTS: 2 ISOFORMS: A LONG FORM (SHOWN HERE) AND A
 CC SHORT FORM; ARE PRODUCED BY ALTERNATIVE SPLICING. THE LONG FORM
 CC CONTAINS A BASIC INSERT WHICH ACTS AS A CELL RETENTION SIGNAL.
 CC -I- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE
 CC PDGF RECEPTOR.
 CC -I- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
 CC -I- DATABASE: NAME-R&D Systems' cytokine source book.
 CC WWW="http://www.rndsystems.com/cyt_cat/pdgf.html".
 CC -----
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 CC -----
 DR EMBL; M21571; -- NOT_ANNOTATED_CDS.
 DR EMBL; X03795; CA27421.1; --
 DR EMBL; X06374; CAA29677.1; --
 DR EMBL; M20494; AAA60045.1; --
 DR EMBL; M20488; AAA60045.1; JOINED.
 DR EMBL; M20489; AAA60045.1; JOINED.
 DR EMBL; M20490; AAA60045.1; JOINED.
 DR EMBL; M20491; AAA60045.1; JOINED.
 DR EMBL; M20492; AAA60045.1; JOINED.
 DR EMBL; M20493; AAA60045.1; JOINED.
 DR EMBL; M19988; AAA60046.1; --
 DR EMBL; M21571; AAA60046.1; JOINED.

DR EMBL: M19984; AAA60046.1; JOINED.
 DR EMBL: M19985; AAA60046.1; JOINED.
 DR EMBL: M19986; AAA60046.1; JOINED.
 DR EMBL: M19987; AAA60046.1; JOINED.
 DR EMBL: M19989; AAA60047.1; JOINED.
 DR EMBL: M21571; AAA60047.1; JOINED.
 DR EMBL: M19984; AAA60047.1; JOINED.
 DR EMBL: M19985; AAA60047.1; JOINED.
 DR EMBL: M19986; AAA60047.1; JOINED.
 DR EMBL: M19987; AAA60047.1; JOINED.
 DR EMBL: A09204; CA000830.1; JOINED.
 DR EMBL: A09204; CA000830.1; JOINED.
 DR PIR: A28964; PF00072; 1.
 DR PIR: B28964; B28964.
 DR HSP: P01127; 1PDG.
 DR MIM: 173430; 1.
 DR InterPro: IPR000072; 1.
 DR InterPro: IPR002400; 1.
 DR Pfam: PF00341; PDGF; 1.
 DR PRINTS: PR00438; GPCYSKNOT.
 DR PROSITE: PS00249; PDGF_1; 1.
 DR PROSITE: PS00278; PDGF_2; 1.
 DR GlycoProtein: Mitogen; Growth factor; Platelet; Alternative splicing;
 KW Signal.
 FT SIGNAL 1 20
 FT PROPEP 21 86
 FT CHAIN 87 211
 FT SITE 158 162
 FT DISULFID 96 140
 FT DISULFID 129 177
 FT DISULFID 133 179
 FT DISULFID 123 123
 FT DISULFID 132 132
 FT CARBOHYD 134 134
 FT CARSPIC 194 196
 FT VARSPIC 197 211
 FT CONFLICT 64 66
 FT SEQUENCE 211 AA; 24043 MW; 48633DDE58BEFA3 CRC64;
 SO
 Query Match 16.7%; Score 104; DB 1; Length 211;
 Best Local Similarity 34.0%; Pred. No. 0.0006;
 Matches 32; Conservative 12; Mismatches 34; Indels 16; Gaps 6;
 QY 16 CTPEFVSST-REELKRTDTIF--WPGCLYKRGSGNACCLHNCNEOCQPSKV---TK 69
 DB 96 CKTFTVYVEIPRSOVDPTSANFLIMPCEVYKRGCTG---CC--WTSSVKCPSPRYHRSV 150
 QY 70 KYHEVLQRPKTVGRLHKLSTDALEHNECDC 103
 DB 151 KVAKEVYRKPKRLKEV-----QVRLHEHLECAC 179
 Db
 RESULT 11
 PDGF_MOUSE STANDARD; PRT; 211 AA.
 ID AC P20033;
 DT 01-FEB-1991 (Rel. 17, Created)
 DT 01-OCT-1996 (Rel. 34, Last sequence update)
 DT 01-OCT-2000 (Rel. 40, Last annotation update)
 DE PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)
 DE (PDGF-1).
 GN PDGFA.
 OS Mus musculus (mouse).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
 OX NCBI_TaxID=10090;
 RN 11
 RP SEQUENCE FROM N.A. (LONG AND SHORT FORMS).
 RC STRAIN-BALB/C;
 RX MEDLINE=94031105; PubMed=1340209;
 RA Rorsman F., Bethholtz C.;
 RT "Characterization of the mouse PDGF A-chain gene. Evolutionary

RT conservation of gene structure, nucleotide sequence and alternative
 RT splicing."
 RL Growth Factors 6:303-313(1992).
 RN (2)
 RP SEQUENCE FROM N.A. (SHORT FORM).
 RC STRAIN-F9;
 RX MEDLINE=90169294; PubMed=2155144;
 RA Mercola M., Wang C., Kelly J., Brownlee C., Jackson-Grusby L.,
 RA Stiles C., Bowen-Pope D.;
 RT "Selective expression of PDGF A and its receptor during early mouse
 RT embryogenesis."
 RL dev. Biol. 138:114-122(1990).
 CC -1- FUNCTION: PLATELET-DERIVED GROWTH FACTOR IS A POTENT MITOGEN FOR
 CC CELLS OF MESENCHYMAL ORIGIN. BINDING OF THIS GROWTH FACTOR TO ITS
 CC AFFINITY RECEPTOR ELICITS A VARIETY OF CELLULAR RESPONSES. IT IS
 CC RELEASED BY PLATELETS UPON WOUNDING AND PLAYS AN IMPORTANT ROLE
 CC IN STIMULATING ADJACENT CELLS TO GROW AND THEREBY HEALS THE WOUND.
 CC -1- SUBUNIT: ANTIPARALLEL DISULFIDE-LINKED DIMER OF NONIDENTICAL (A
 CC AND B) CHAINS. HOMODIMERS OF A AND B CHAINS ARE IMPLICATED IN
 CC TRANSFORMATION PROCESSES.
 CC -1- ALTERNATIVE PRODUCTS: 2 ISOFORMS: A LONG FORM (SHOWN HERE) AND A
 CC SHORT FORM. ARE PRODUCED BY ALTERNATIVE SPLICING. THE LONG FORM
 CC CONTAINS A BASIC INSERT WHICH ACTS AS A CELL RETENTION SIGNAL.
 CC -1- MISCELLANEOUS: A-A AND B-B, AS WELL AS A-B, DIMERS CAN BIND TO THE
 CC PDGF RECEPTOR.
 CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
 CC -----
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 CC -----
 DR EMBL: S66873; AAB28740.2; JOINED.
 DR EMBL: S66868; AAB28740.2; JOINED.
 DR EMBL: S66869; AAB28740.2; JOINED.
 DR EMBL: S66870; AAB28740.2; JOINED.
 DR EMBL: S66871; AAB28740.2; JOINED.
 DR EMBL: S66872; AAB28740.2; JOINED.
 DR EMBL: S66874; AAB28741.2; JOINED.
 DR EMBL: S66868; AAB28741.2; JOINED.
 DR EMBL: S66869; AAB28741.2; JOINED.
 DR EMBL: S66870; AAB28741.2; JOINED.
 DR EMBL: S66871; AAB28741.2; JOINED.
 DR EMBL: S66872; AAB28741.2; JOINED.
 DR EMBL: M29464; AAA39903.1; JOINED.
 DR PIR: A37359; A37359.
 DR HSP: P01127; 1PDG.
 DR MGD: MGI:97527; PDGfa.
 DR InterPro: IPR000072; 1.
 DR InterPro: IPR002400; 1.
 DR Pfam: PF00341; PDGF; 1.
 DR PRINTS: PR00438; GPCYSKNOT.
 DR PROSITE: PS00249; PDGF_1; 1.
 DR PROSITE: PS00278; PDGF_2; 1.
 KW GlycoProtein; Mitogen; Growth factor; Platelet; Alternative splicing;
 KW Signal.
 FT SIGNAL 1 20
 FT PROPEP 21 86
 FT CHAIN 87 211
 FT SITE 158 162
 FT DISULFID 96 140
 FT DISULFID 129 177
 FT DISULFID 133 179
 FT DISULFID 123 123
 FT DISULFID 132 132
 FT CARBOHYD 134 134
 FT CARSPIC 194 196
 FT VARSPIC 197 211
 FT CONFLICT 92 92
 FT CONFLICT 174 174
 REMOVED BY PROTEOLYSIS.
 PLATELET-DERIVED GROWTH FACTOR, A CHAIN.
 RECEPTOR BINDING SITE (POTENTIAL).
 BY SIMILARITY.
 BY SIMILARITY.
 BY SIMILARITY.
 INTERCHAIN (BY SIMILARITY).
 INTERCHAIN (BY SIMILARITY).
 N-LINKED (GLCNAC...).
 GRP -> DVR (IN SHORT ISOFORM).
 MISSING (IN SHORT ISOFORM).
 V -> I (IN REF. 2).
 H -> D (IN REF. 1).

SEQUENCE 211 AA: 24102 MW: AC4345A10ECF4B39 CRC64:

Query Match 16.7%: Score 104: DB 1: Length 211:
Best Local Similarity 34.0%: Pred. No. 0.00064:
Matches 32: Conservative 12: Mismatches 34: Indels 16: Gaps 6:

QY 16 CTPRNFVSIV-REELKRTDTIF--WPGCLLVKRCGNCACCLHNCNCCVPSKV---TK 69
DB 96 CTRFVIVYIPRSQVPTANFLIMPPCVKRCGTG---CC--NTSSVCKCPSRVHRRSV 150
QY 70 KYHEVQLRPKTVGRGLKSLTDVALEHHECCD 103
DB 151 KVAKEVYKRRKKPKLEKVE---QVRLLEHLECCAC 179

RESULT 12

TSIS_SMSAV STANDARD: PRT: 226 AA.

ID TSIS_SMSAV 041283:

DT 21-JUL-1986 (Rel. 01, Created)

DT 21-JUL-1986 (Rel. 01, Last sequence update)

DT 15-JUL-1999 (Rel. 38, Last annotation update)

DE PDGF-RELATED TRANSFORMING PROTEIN P28-SIS.

GN V-SIS.

OS Simian sarcoma virus.

OC Viruses; Retrovirdae; Retroviridae; Mammalian type C retroviruses.

ON NCBI_TaxID=11817;

RX MEDLINE=83144004; Pubmed=6298772;

RA Devare S.G., Reddy E.P., Law J.D., Robbins K.C., Aaronson S.A.;

RT "Nucleotide sequence of the simian sarcoma virus genome:

RT demonstration that its acquired cellular sequences encode the

RT transforming gene product p28sis";

RT Proc. Natl. Acad. Sci. U.S.A. 80:731-735(1983).

CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.

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CC EMBL: V01201; CAA24516.1; ALT_INIT.

DR PIR: A01381; TVMVS.

DR HSSP: P01127; 1PDG.

DR InterPro: IPR000072;

DR InterPro: IPR002400;

DR Pfam: PF00341; PDGF_1.

DR PRINTS: PR00438; GFCYSKNOT.

DR PROSITE: PS00249; PDGF_1; 1.

DR PROSITE: PS50278; PDGF_2; 1.

KW Transforming protein; Oncogene; Growth factor.

SO SEQUENCE 226 AA: 25411 MW: A16813AB95B90C5 CRC64:

Query Match 16.7%: Score 104: DB 1: Length 226:
Best Local Similarity 33.3%: Pred. No. 0.00064:
Matches 36: Conservative 12: Mismatches 34: Indels 26: Gaps 9:

QY 7 LTEEVLYSCTPRN--FSVSIREFLKTDTIF--WPGCLLVKRCGNCACCLHNCNCCOC 62
DB 73 VAEPAMIAICKRTREVFELS--RLIDRTNANFLVMPPCVEYQRCSS---CC--NNRNQOC 126

QY 63 VPSKVTKKKHEVQLRP---KTGV---RGLKSLTDVALEHHECCD 103
DB 127 RPTOV-----QLRPVQVRKIEIVRRKPIRKAT--VLEDLHACKC 165

RESULT 13

VEGH_ORFN2 STANDARD: PRT: 133 AA.

AC VEGH_ORFN2 P52584;

DT 01-OCT-1996 (Rel. 34, Created)

DT 01-OCT-1996 (Rel. 34, Last sequence update)

DT 01-OCT-2000 (Rel. 40, Last annotation update)

DE VASCULAR ENDOTHELIAL GROWTH FACTOR HOMOLOG PRECURSOR.

GN A2R.

OS Orf virus (strain NZ2) (OV NZ-2).

OC Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;

OC Parapoxvirus.

ON NCBI_TaxID=10259;

RX MEDLINE=94076465; Pubmed=8254780;

RA Lytle D.J., Fraser K.M., Fleming S.B., Mercer A.A., Robinson A.J.;

RT "Homologs of vascular endothelial growth factor are encoded by the

RT poxvirus orf virus";

RL J. Virol. 68:84-92(1994).

CC -1- FUNCTION: INDUCES ENDOTHELIAL PROLIFERATION.

CC -1- SUBUNIT: HOMODIMER, DISULFIDE-LINKED (BY SIMILARITY).

CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.

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CC EMBL: S67520; AAB29220.2;

DR HSSP: P15692; 1VPF.

DR InterPro: IPR000072;

DR Pfam: PF00341; PDGF_1.

DR PROSITE: PS00249; PDGF_1; 1.

DR PROSITE: PS50278; PDGF_2; 1.

KW Mitogen; Growth factor; Glycoprotein; Signal.

FT SIGNAL 1 133 POTENTIAL.

FT CHAIN 1 133 VASCULAR ENDOTHELIAL GROWTH FACTOR

FT FT 36 78 HOMOLOG.

FT DISULFID 67 112 BY SIMILARITY.

FT DISULFID 71 114 BY SIMILARITY.

FT DISULFID 61 61 INTERCHAIN (BY SIMILARITY).

FT DISULFID 70 70 INTERCHAIN (BY SIMILARITY).

FT CARBOHYD 85 85 N-LINKED (GLCNAC...) (POTENTIAL).

SO SEQUENCE 133 AA: 14715 MW: 917C0F6883030C39 CRC64:

Query Match 16.5%: Score 102.5: DB 1: Length 133:
Best Local Similarity 30.5%: Pred. No. 0.00055:
Matches 32: Conservative 18: Mismatches 40: Indels 15: Gaps 6:

QY 8 TEEVRLYSCTPRNFSVSIRE---ELKRTDTIFWPGCLLVKRCGNCACCLHNCNCCVCP 64
DB 28 SEVLGSECKPRPIVYVSETHPEL--TSQRENPPCVTLMRGCG---CC--NDESLQCV 80

QY 65 SKVTKKKHEVQLRPKTVGRGLKSLTDVALEHHECCDVCGRST 109
DB 81 TEEVNSMELLG--ASGSGSGNMOR---LSFVHKKCKDCRPFPTT 120

RESULT 14

VEGF_PIG STANDARD: PRT: 190 AA.

AC VEGF_PIG P49151;

DT 01-FEB-1996 (Rel. 33, Created)

DT 01-FEB-1996 (Rel. 33, Last sequence update)

DT 01-OCT-1996 (Rel. 34, Last annotation update)

DE VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR (VEGF) (VASCULAR

PERMEABILITY FACTOR) (VPF).

GN VEGF.

```

OS Sus scrofa (Pig).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Cetartiodactyla; Suidae; Sus.
OX NCBI_TaxId=96063;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE-Heart;
RX MEDLINE=95143284; PubMed=7841203;
RA Sharma H.S., Tang Z.H., Gho B.C.H., Verdouw P.D.;
RT "Nucleotide sequence and expression of the porcine vascular
    endothelial growth factor";
RL Blochim. Biophys. Acta 1260:235-238(1995).
CC -1- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL
CC CELL GROWTH. INDUCES ENDOTHELIAL PROLIFERATION AND VASCULAR
CC PERMEABILITY (BY SIMILARITY).
CC -1- SUBUNIT: HOMODIMER, DISULFIDE-LINKED (BY SIMILARITY).
CC -1- SUBCELLULAR LOCATION: SECRETED BUT REMAINS ASSOCIATED TO CELLS OR
CC TO THE EXTRACELLULAR MATRIX UNLESS RELEASED BY HEPARIN (BY
CC SIMILARITY).
CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
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CC -----
DR EMBL: X81380; CAA57143.1; -
DR HSSP: P15692; 2VGH.
DR InterPro: IPR000072; -
DR Pfam: PF00341; PDGF_1; 1.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS50278; PDGF_2; 1.
KW Mitogen; Growth factor; Glycoprotein; Signal.
FT SIGNAL 1 26
FT CHAIN 27 190
FT DISULFID 51 93
FT DISULFID 82 127
FT DISULFID 86 129
FT DISULFID 76 76
FT DISULFID 85 85
FT CARBOHYD 100 100
FT SEQUENCE 190 AA; 22368 MW; 04D408BD7913047F CRC64;
SQ
Query Match 16.5%; Score 102.5; DB 1; Length 190;
Best Local Similarity 27.0%; Pred. No. 0.00078;
Matches 24; Conservative 20; Mismatches 34; Indels 11; Gaps 4;
OY 16 CTPRNSVSIREEL-KRTDTIPPGCLLVKRCGCACCLAHNCEQCVPSKYTKYHEV 74
DB 51 CRIETLVDFEYDEIETIFPCVPRCGG---CC--NDEGLCVPTSEINIMTOI 105
OY 75 LQLRPKTGVGLHSLTDVALEHHEECDC 103
DB 106 MRIKPHQG-----QHIGKMSFLQHNKCEC 129
RESULT 15
VEGC_HUMAN STANDARD; PRT; 419 AA.
ID VEGC_HUMAN
AC P49767;
DT 01-OCT-1996 (rel. 34, Created)
DT 01-OCT-1996 (rel. 34, Last sequence update)
DT 01-OCT-2000 (rel. 40, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR C PRECURSOR (VEGF-C) (VASCULAR
DE ENDOTHELIAL GROWTH FACTOR RELATED PROTEIN) (VRP) (FLT4 LIGAND) (FLT4-
DE L).
GN VEGFC.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

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OC Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
OX NCBI_TaxId=96063;
RN [1]
RP SEQUENCE FROM N.A., AND SEQUENCE OF 103-120.
RX MEDLINE=96178224; PubMed=8617204;
RA Joukov V., Pajusola K., Kaipainen A., Chillov D., Lahtinen I., Kukk E.,
RA Saksela O., Kalkkinen N., Alitalo K.;
RT "A novel vascular endothelial growth factor, VEGF-C, is a ligand for
RT the Flt4 (VEGFR-3) and KDR (VEGFR-2) receptor tyrosine kinases.";
RL EMBO J. 15:290-298(1996).
RN [2]
RP ERRATUM.
RX MEDLINE=96203094; PubMed=8612600;
RA Joukov V., Pajusola K., Kaipainen A., Chillov D., Lahtinen I., Kukk E.,
RA Saksela O., Kalkkinen N., Alitalo K.;
RL EMBO J. 15:1751-1751(1996).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=96312526; PubMed=8700872;
RA Lee J., Gray A., Yuan J., Luoh S.-M., Avraham H., Wood M.I.;
RT "Vascular endothelial growth factor-related protein: a ligand and
RT specific activator of the tyrosine kinase receptor Flt4.";
RL Proc. Natl. Acad. Sci. U.S.A. 93:1988-1992(1996).
RN [4]
RP SEQUENCE FROM N.A.
RA Fitz L., Morris J.C., Towler P.S., Long A.J., Greco R.,
RA Burgess P., Gianotti J., Claretta A., Hennessey D., Kovacic S.,
RA Fitzgerald M., Scaltreto H., Welch N., Neben S., Flinnerty H.,
RA Zolner R., Wang J., Nickbarg E., Gasaway R., Turner K.,
RA Wood C.R.;
RL Submitted (JUN-1996) to the EMBL/GenBank/DBJ databases.
CC -1- FUNCTION: GROWTH FACTOR ACTIVE IN ANGIOGENESIS, AND ENDOTHELIAL
CC CELL GROWTH.
CC -1- SUBUNIT: HOMODIMER, DISULFIDE-LINKED.
CC -1- PTM: PROBABLY PROTEOLITICALLY PROCESSED IN THE C-TERMINUS.
CC -1- SIMILARITY: BELONGS TO THE PDGF/VEGF FAMILY OF GROWTH FACTORS.
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CC -----
DR EMBL: X94216; CAA63907.1; -
DR EMBL: U43142; AA85214.1; -
DR EMBL: U58111; AA802909.1; -
DR HSSP: P15692; 1VPF.
DR MIM: 601528; -
DR InterPro: IPR000072; -
DR InterPro: IPR002400; -
DR Pfam: PF00341; PDGF_1; 1.
DR PRINTS: PRO0438; GFCYSKNOT.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS50278; PDGF_2; 1.
KW Mitogen; Growth factor; Glycoprotein; Signal; Repeat.
FT SIGNAL 1 2
FT PROPEP 3 102
FT CHAIN 103 419
FT DOMAIN 275 365
FT REPEAT 275 298
FT REPEAT 299 322
FT REPEAT 323 346
FT REPEAT 347 365
FT CARBOHYD 175 175
FT CARBOHYD 205 205
FT CARBOHYD 240 240
FT SEQUENCE 419 AA; 46883 MW; 9F598719DB3E014F CRC64;
SQ
Query Match 16.5%; Score 102.5; DB 1; Length 419;
Best Local Similarity 28.2%; Pred. No. 0.0017;

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Matches	31: Conservative	15: Mismatches	43: Indels	21: Gaps
Qy	4 LNLILTEENVALYSCPTPRNFSSVSIREEEL-KRTDPIFMFGCLLYRCGNCACCLHNCNECOC	62		
Db	119 LKSIDNEHMKKTPQCMREVCIDVKGKFGVATNFFKPPCVSVYRCGG---CC--NSEGLDC	173		
Qy	63 V---PSKYTKKRYHEV---LQLRPKGTGVNGLHSLTDVALEHHNEEDCYCR	106		
Db	174 MMTSYSYLSKLTLELTVPVLSGGPKP-----VTISANNTTSCRCMSK	214		

Search completed: July 3, 2001, 10:33:06
Job time: 206 sec

Result No.	Score	Query Match	Length	DB	ID	Description
1	114.5	18.4	148	2	D49510	16k vascular endothelial
2	108	17.4	166	2	JN0248	platelet-derived
3	108	17.4	198	2	JS0735	platelet-derived
4	105	16.9	200	2	I51511	platelet-derived
5	105	16.9	215	2	S08220	platelet-derived
6	105	16.9	226	2	I51510	platelet-derived
7	105	16.9	241	1	PFHUC2	platelet-derived
8	105	16.9	245	1	TVCCTS	platelet-derived
9	104.5	16.8	232	2	A41511	vascular endothelial
10	104	16.7	196	2	B28964	platelet-derived
11	104	16.7	197	2	S25096	platelet-derived
12	104	16.7	211	1	PFHUC1	platelet-derived
13	104	16.7	226	1	TVMVSS	PGF-related transmembrane
14	102.5	16.5	133	2	B49510	vascular endothelial
15	102.5	16.5	190	2	S52130	vascular endothelial
16	102.5	16.5	196	2	A37359	platelet-derived
17	102.5	16.5	196	2	A44881	platelet-derived
18	102.5	16.5	419	2	S69207	vascular endothelial
19	101.5	16.3	120	2	A33787	vascular endothelial
20	101.5	16.3	146	2	S57956	ovine vascular endothelial
21	101.5	16.3	190	2	B40080	vascular endothelial
22	97	15.6	188	2	JC4680	vascular endothelial
23	97	15.6	207	2	JC4679	vascular endothelial
24	96.5	15.5	190	2	A35967	glioma-derived vascular
25	95.5	15.4	190	2	B44881	vascular endothelial
26	95.5	15.4	214	2	A44881	vascular endothelial
27	94	15.1	225	1	S25097	platelet-derived
28	94	15.1	221	1	PFMSGB	platelet-derived
29	88	14.2	271	2	A25669	PGC-related transmembrane

30	151295	128	2	A51295	vascular endothelial
31	83.5	13.4	2	A3932	muscin 2 precursor
32	80	12.9	2	A56125	placental growth f
33	79	12.7	2	A41236	placental growth f
34	77.5	12.5	2	T23433	hypothetical protei
35	77.5	12.5	2	T37316	probable laminin a
36	75.5	12.2	2	G84522	similar to glibdere
37	74.5	12.0	2	G96828	hypothetical prote
38	72	11.6	2	S57894	laminin - Hydra v.
39	71.5	11.5	2	S18853	laminin alpha-1 ch
40	71	11.4	2	JC2420	metallothionein -
41	71	11.4	2	T07076	metallothionein t
42	71	11.4	2	T07114	metallothionein-11
43	71	11.4	2	D86336	protein F14N23.5
44	70.5	11.4	2	T00564	glibdrellin-regula
45	70.5	11.4	2	A30889	integrin beta cha

ALIGNMENTS

RESULT 1
D49530
16k vascular endothelial growth factor homolog A2R - Orf virus
C:Species: Orf virus
C:Date: 07-Apr-1994 #sequence_revision 18-Nov-1994 #text_change 08-Oct-1999
C:Accession: D49530
R:Lytle, D.J.; Fraser, K.M.; Fleming, S.B.; Mercer, A.A.; Robinson, A.J.
J. Virol. 68, 84-92, 1994
A:Title: Homologs of vascular endothelial growth factor are encoded by the poxvirus
A:Reference number: A49530; MUID: 94076465
A:Contents: NZ7
A:Accession: D49530
A:Status: preliminary
A:Molecule type: DNA
A:Residues: 1-148 <LT>
A:Cross-references: NID:G456900; PIDN:AA82923.1; PID:G456902
A:Note: sequence extracted from NCBI backbone (NCBIN:141422, NCBIPI:141426)

	Query Match	18.4%	Score 114.5	DB 2	Length 148
	Best Local Similarity	30.2%	Pred. 0.00028		
	Matches 29	Conservative 19	Mismatches 43	Indels 5	Gaps 3
Oy	16	CTPRNFSYIREL-KRTDIFMPCGLVKRGCGNACCLHNCNECOVPSKYTKYHEV	74		
Db	46	CKPRDTVYVYLGEEYESTNLQTNPPRCVYVKKRSG---CCNGDQICSTAVETRNITVYVS	102		
Oy	75	LQLRPTGVK-GLHKSITDVALEHHHEECDCVCRGST	109		
	: :				
Db	103	TGVSSSGTNSGVSINLQRISTVETHTKDCIGRTTT	138		

```

RESULT      2
JN0248
platelet-derived growth factor chain A3 precursor - rabbit (fragment)
C:Species: Oryctolagus cuniculus (domestic rabbit)
C:Date: 09-Oct-1992 #sequence_revision 09-Oct-1992 #text_change 27-Jun-1994
C:Accession: JN0248
R:Nakahara, K.; Nishimura, H.; Kuro-O, M.; Takeaki, S.; Iwase, M.; Ohkubo, A.; Yazaki,
Biochem. Biophys. Res. Commun. 184, 811-818, 1992
A:Title: Identification of three types of PDGF-A chain gene transcripts in rabbit ves-
A:Reference number: JN0248; MUID:92246970
A:Accession: JN0248
A:Molecule type: mRNA
A:Residues: 1-166 <NAK>
C:Superfamily: platelet-derived growth factor
F:1-22/domain: propeptide (fragment) #status predicted <PRO>
F:23-166/Product: platelet-derived growth factor A3 chain #status predicted <NAT>

```

Query Match	17.4%;	Score 108;	DB 2;	length 166
Best Local Similarity	32.3%;	Pred. No. 0.0014;		

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Matches 32; Conservative 14; Mismatches 41; Indels 12; Gaps 6;

Oy 16 CTPRNFVSIV-REELKRPDTIF--WPGCLLYKRCGNGACCLHNCNEQCVPSKYTKYH 72
Db 31 CKTRVIVYEIPRSQVDPTSANFLIMPCEVVKRCG---CC--NTSSVVKCOPSRV---HH 82

Oy 73 EVIOLRPKTVGRLKSLTDVALEHNEECDCVCRGSTCG 111
Db 83 RSVKAKVEYVKKRK-LKEVQLRELEHLECCAASSAG 120

RESULT 3
JS0735
platelet-derived growth factor chain A1 precursor - rabbit
C:Species: Oryctolagus cuniculus (domestic rabbit)
C:Date: 09-Oct-1992 #sequence_revision 09-Oct-1992 #text_change 27-Jun-1994
C:Accession: JS0735
R:Nakahara, K.; Nishimura, H.; Kuro-O, M.; Takeaki, S.; Iwase, M.; Ohkubo, A.; Yazaki,
Biochem. Biophys. Res. Commun. 184, 811-818, 1992
A:Title: Identification of three types of POU-F-A chain gene transcripts in rabbit vascul
A:Reference number: JN0248; MUID:92246970
A:Accession: JS0735
A:Molecule type: mRNA
A:Residues: 1-198 <NAK>
A:Note: this protein corresponds to the endothelial type of human A chain
C:Superfamily: platelet-derived growth factor
F:1-20/Domain: signal sequence #status predicted <SIG>
F:21-89/Domain: propeptide #status predicted <PRO>
F:90-198/Product: platelet-derived growth factor A1 chain #status predicted <MAT>

Query Match 17.4%; Score 108; DB 2; Length 198;
Best Local Similarity 32.3%; Pred. No. 0.0016;
Matches 32; Conservative 14; Mismatches 41; Indels 12; Gaps 6;

Oy 16 CTPRNFVSIV-REELKRPDTIF--WPGCLLYKRCGNGACCLHNCNEQCVPSKYTKYH 72
Db 98 CKTRVIVYEIPRSQVDPTSANFLIMPCEVVKRCG---CC--NTSSVVKCOPSRV---HH 149

Oy 73 EVIOLRPKTVGRLKSLTDVALEHNEECDCVCRGSTCG 111
Db 150 RSVKAKVEYVKKRK-LKEVQLRELEHLECCAASSAG 187

RESULT 4
151551
platelet-derived growth factor A chain short form precursor - African clawed frog
C:Species: Xenopus laevis (African clawed frog)
C:Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C:Accession: 151551
R:Mercola, M.; Melton, D.A.; Stiles, C.D.
Science 241, 1223-1225, 1988
A:Title: Platelet-derived growth factor A chain is maternally encoded in Xenopus embryos
A:Reference number: 151550; MUID:88321676
A:Accession: 151551
A:Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-200 <MER>
A:Cross-references: GB:M2328; NID:g214650; PIDN:AAA49928.1; PID:g214651
C:Superfamily: platelet-derived growth factor

Query Match 16.9%; Score 105; DB 2; Length 200;
Best Local Similarity 31.4%; Pred. No. 0.0032;
Matches 33; Conservative 14; Mismatches 32; Indels 26; Gaps 8;

Oy 16 CTPRNFVSIV-EEELKRPDTIF--WPGCLLYKRCGNGACCLHNCNEQCVPSKYTKYH 72
Db 101 CKTRVIVYEIPRSQVDPTSANFLIMPCEVVKRCG---CC--NTSSVVKCOPSRV---HH 152

Oy 73 -----EVLQLRPKTVGRLKSLTDVALEHNEECDCVCRGST 109
Db 153 RSVKAKVEYVKKRK-----LKEVL--VRLEHNEECCTANSS 190

```

```

RESULT      5
S08220
platelet-derived growth factor chain A precursor - African clawed frog
C:Species: Xenopus laevis (African clawed frog)
C:Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 16-Jul-1999
C:Accession: S08220
R:Bjork, B.E.; Li, D.Y.; Denel, T.F.
Nucleic Acids Res. 18, 680, 1990
A>Title: Nucleotide sequence of a cDNA clone of Xenopus platelet-derived growth factor
A:Reference number: S08220; MUID:90175018
A:Accession: S08220
A>Status: translation not shown
A:Molecule type: mRNA
A:Residues: 1-215 <BEE>
A:Cross-references: EMBL:X17545; NID:964973; PIDN:CAJ5583.1; PID:964974
C:Superfamily: platelet-derived growth factor
C:Keywords: alternative splicing; growth factor
F:1-22/Domain: signal sequence #status predicted <SIG>
F:23-91/Domain: propeptide #status predicted <PRO>
F:92-215/Product: platelet-derived growth factor chain A #status predicted <MAT>

Query Match          16.9% Score 105; DB 2; Length 215;
Best Local Similarity 31.4%; Pred. No. 0.0034;
Matches 33; Conservative 14; Mismatches 32; Indels 26; Gaps 8;

OY    16 CTRPNFSVSI-REELKRTDTIF--WPGCLLVKRCGNCACCLHNCNECCQVP SKTKKYH 72
      | | | | | : | | | | | | | | | | | | | | | | | | | | | | | |
DB    101 CKTRIVVEIPRSQDIPSNANFLIMPCEVVKRCGT---CC--NTSSVKCP SR I---HH 152
      | | | | | | | | | | | | | | | | | | | | | | | |
       -----EVLQLRKPTGVRGLHKSLTDVALEHHEECDCVCRGST 109
      | | | | | | | | | | | | | | | | | | | | | | | |
DB    153 RSVKAVKEVYKKPKR-----LKEVL-VRL EEHL ECTJANSNS 190
      | | | | | | | | | | | | | | | | | | | | | | | |

RESULT      6
I51550
platelet-derived growth factor A chain long form precursor - African clawed frog
C:Species: Xenopus laevis (African clawed frog)
C:Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999
C:Accession: I51550
R:Mercola, M.; Melton, D.A.; Stiles, C.D.
Science 241, 1223-1225, 1988
A>Title: Platelet-derived growth factor A chain is maternally encoded in Xenopus embryo
A:Reference number: I51550; MUID:88321676
A:Accession: I51550
A>Status: preliminary; translated from GB/EMBL/DBJ
A:Molecule type: mRNA
A:Residues: 1-226 <MER>
A:Cross-references: GB:M23237; NID:g214648; PIDN:AAA49927.1; PID:g214649
C:Superfamily: platelet-derived growth factor

Query Match          16.9% Score 105; DB 2; Length 226;
Best Local Similarity 31.4%; Pred. No. 0.0035;
Matches 33; Conservative 14; Mismatches 32; Indels 26; Gaps 8;

OY    16 CTRPNFSVSI-REELKRTDTIF--WPGCLLVKRCGNCACCLHNCNECCQVP SKTKKYH 72
      | | | | | : | | | | | | | | | | | | | | | | | | | | | | | |
DB    101 CKTRIVVEIPRSQDIPSNANFLIMPCEVVKRCGT---CC--NTSSVKCP SR I---HH 152
      | | | | | | | | | | | | | | | | | | | | | | | |
       -----EVLQLRKPTGVRGLHKSLTDVALEHHEECDCVCRGST 109
      | | | | | | | | | | | | | | | | | | | | | | | |
DB    153 RSVKAVKEVYKKPKR-----LKEVL-VRL EEHL ECTJANSNS 190
      | | | | | | | | | | | | | | | | | | | | | | | |

RESULT      7
PNUHG2
platelet-derived growth factor chain B precursor [validated] - human
N:Alternate names: PDGF B-chain; PDGF-B; PDGF-II; PDGF-related transforming protein (
C:Species: Homo sapiens (man)

```

C.Date: 18-Apr-1984 #sequence_revision 20-Sep-1984 #text_change 08-Dec-2000
 C.Accession: A94276; A21024; A23532; A93366; A25141; A94271; A93308; A43499; S56115; 157
 R.Josephson, S.F.; Ratner, L.; Clarke, M.F.; Westlin, E.H.; Reltz, M.S.; Wong-Staal, F.
 Science 225, 636-639, 1984
 A.Title: Transforming potential of human c-sis nucleotide sequences encoding platelet-de
 A.Reference number: A94276; MUID:84250225
 A.Accession: A94276
 A.Molecule type: DNA
 A.Residues: 1-241 <JOS1>
 A.Cross-references: GB:K01401; NID:9338206; PIDN:AAA60552.1; PID:9338209
 R.Chu, I.M.; Reddy, E.P.; Givol, D.; Robbins, K.C.; Tronick, S.R.; Aaronson, S.A.
 Cell 37, 123-129, 1984
 A.Title: Nucleotide sequence analysis identifies the human c-sis proto-oncogene as a str
 A.Reference number: A21024; MUID:84205633
 A.Accession: A21024
 A.Molecule type: DNA
 A.Residues: 17-20, 'RO', 22-241 <CHI>
 A.Cross-references: GB:K01917; NID:9338197
 R.Rao, C.D.; Igarashi, H.; Chiu, I.M.; Robbins, K.C.; Aaronson, S.A.
 Proc. Natl. Acad. Sci. U.S.A. 83, 2392-2396, 1986
 A.Title: Structure and sequence of the human c-sis/platelet-derived growth factor 2 (srs
 A.Reference number: A23532; MUID:86205961
 A.Accession: A23532
 A.Molecule type: mRNA
 A.Residues: 1-241 <RAO1>
 A.Cross-references: GB:M12783; GB:M16288; NID:9338210; PIDN:AAA60553.1; PID:9338211
 R.Collins, T.; Ginsburg, D.; Boss, J.M.; Oklin, S.H.; Pober, J.S.
 Nature 316, 748-750, 1985
 A.Title: Cultured human endothelial cells express platelet-derived growth factor B chain
 A.Reference number: A93366; MUID:85296313
 A.Accession: A93366
 A.Molecule type: mRNA
 A.Residues: 1-241 <COL>
 A.Cross-references: GB:X02811; NID:935371; PIDN:CAA26579.1; PID:935372
 R.Weich, H.A.; Seebald, W.; Schaefer, H.U.; Hoppe, J.
 FEBS Lett. 198, 344-348, 1986
 A.Title: The human osteosarcoma cell line U-2 OS expresses a 3.8 kilobase mRNA which cod
 A.Reference number: A25141; MUID:86164981
 A.Accession: A25141
 A.Molecule type: mRNA
 A.Residues: 26-241 <WEI>
 A.Cross-references: GB:X03702; NID:935374; PIDN:CAA27333.1; PID:935375
 R.Antonides, H.N.; Hunkapiller, M.W.
 Science 220, 963-965, 1983
 A.Title: Human platelet-derived growth factor (PDGF): amino-terminal amino acid sequence
 A.Reference number: A94271; MUID:83197379
 A.Accession: A94271
 A.Molecule type: protein
 A.Residues: 82-100, 'E', 102-104, 'C', 106, 'C', 108-110 <ANT>
 R.Waterfield, M.D.; Scrace, G.T.; Whittle, N.; Stroobant, P.; Johansson, A.; Wasteson, A.
 Nature 304, 35-39, 1983
 A.Title: Platelet-derived growth factor is structurally related to the putative transfor
 A.Reference number: A93308; MUID:83244961
 A.Accession: A93308
 A.Molecule type: protein
 A.Residues: 82-112 <MAT>
 R.Roseng, S.F.; Guo, C.; Ratner, L.; Wong-Staal, F.
 Science 223, 487-491, 1984
 A.Title: Human proto-oncogene nucleotide sequences corresponding to the transforming reg
 A.Reference number: A43499; MUID:84097355
 A.Accession: A43499
 A.Molecule type: DNA
 A.Residues: 'Q', 22-241 <JOS2>
 R.Lu, K.V.; Rohde, M.F.; Thomson, A.R.; Kenney, W.C.; Lu, H.S.
 Biochem. J. 309, 411-417, 1995
 A.Title: Mistranslation of a TGA termination codon as tryptophan in recombinant platelet
 A.Reference number: S56115; MUID:9551967
 A.Accession: S56115
 A.Molecule type: preliminary
 A.Residues: 82-93 <LUK>
 R.Rao, C.D.; Pech, M.; Robbins, K.C.; Aaronson, S.A.

Mol. Cell. Biol. 8, 284-292, 1988
 A.Title: The 5' untranslated sequence of the c-sis/platelet-derived growth factor 2 t
 A.Reference number: 157635; MUID:88094398
 A.Accession: 157635
 A.Molecule type: DNA
 A.Status: translated from GB/EMBL/DBJ
 A.Residues: 1-20 <RAO2>
 A.Cross-references: GB:M19719; NID:9189727; PIDN:AAA60349.1; PID:9553608
 R.Ratner, L.; Josephs, S.F.; Jarrett, R.; Reltz, M.S.
 Nucleic Acids Res. 13, 5007-5018, 1985
 A.Title: Nucleotide sequence of transforming human c-sis cDNA clones with homology to
 A.Reference number: 137266; MUID:85269623
 A.Accession: 137266
 A.Molecule type: mRNA
 A.Status: translated from GB/EMBL/DBJ
 A.Residues: 1-241 <RAT>
 A.Cross-references: EMBL:X02744; NID:930246; PIDN:CAA26524.1; PID:930247
 R.Johnson, A.; Heldin, C.H.; Wasteson, A.; Westermark, B.; Denell, T.F.; Huang, J.S.;
 EMO J. 3, 921-928, 1984
 A.Title: The c-sis gene encodes a precursor of the B chain of platelet-derived growth
 A.Reference number: A55030; MUID:84236121
 A.Accession: A55030
 A.Molecule type: preliminary
 A.Status: preliminary
 A.Residues: 'SLSL', 17-20, 'RO', 22-241 <JOH>
 A.Cross-references: EMBL:X00556; GB:X00559; GB:X00560; GB:X00561; GB:X00562
 R.Dirts, R.P.H.; Onnekink, C.; Jansen, H.J.; de Jong, A.; Bloemers, H.P.J.
 Nucleic Acids Res. 23, 2815-2822, 1995
 A.Title: A novel human c-sis mRNA species is transcribed from a promoter in c-sis int
 A.Reference number: S58382; MUID:9538493
 A.Accession: S58382
 A.Molecule type: preliminary
 A.Status: preliminary
 A.Residues: 'MFMIG', 22-200 <DIR>
 A.Cross-references: EMBL:X83705; NID:9951023; PIDN:CAA58679.1; PID:9951025
 R.Cook, A.L.; Kirwin, P.M.; Craib, S.; Bawden, L.J.; Green, D.R.; Price, M.J.; Richar
 Biochem. J. 281, 57-65, 1992
 A.Title: Purification and analysis of proteinase-resistant mutants of recombinant pla
 A.Reference number: 138108; MUID:92117992
 A.Accession: 138108
 A.Molecule type: translated from GB/EMBL/DBJ
 A.Status: preliminary
 A.Residues: 'M', 82-241 <COO>
 A.Cross-references: EMBL:X63966; NID:9311378; PIDN:CAA45383.1; PID:935377
 A.Note: mutagenized recombinant sequence
 C.Comment: Platelet-derived growth factor, a potent mitogen for cells of mesenchymal
 C.Genetics:
 A.Gene: GDB:PDGFB
 A.Cross-references: GDB:120709; OMIM:190040
 A.Map position: 22q12.3-22q13.1
 A.Introns: 57/3; 94/1; 192/3; 241/1
 C.Complex: homodimer; heterodimer (see PIR:PFHUG1)
 C.Superfamily: platelet-derived growth factor
 C.Keywords: growth factor; mitogen
 F:1-20/Domain: signal sequence #status predicted <SIG>
 F:21-81/Domain: amino-terminal propeptide #status predicted <PRO>
 F:82-190/Product: platelet-derived growth factor chain B #status experimental <MAT>
 F:159-163/Region: receptor binding #status predicted
 F:191-241/Domain: carboxyl-terminal propeptide #status predicted <CTR>
 F:124/Disulfide bonds: interchain (to 133 in homodimeric form) #status experimental
 F:124/Disulfide bonds: interchain (to chain A-132 in heterodimeric form) #status pred
 F:133/Disulfide bonds: interchain (to 124 in homodimeric form) #status experimental
 F:133/Disulfide bonds: interchain (to chain A-124 in heterodimeric form) #status pred

Query Match 16.9%; Score 105; DB 1; Length 241;
 Best Local Similarity 33.3%; Pred. No. 0.0037;
 Matches 36; Conservative 12; Mismatches 34; Indels 26; Gaps 9;

Qy 7 LTFEVALYSCTPNN--FVSYSIRELAKRTDRI--WPGCLLYKRGCGNACCLHNCDECC 62
 Db 88 IAEPMIAECKRTVEFEIS--RLIDRTNANFLVMPCEVORCSG---CC--NNRNVC 141

GenCore version 4.5
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OM protein - protein search, using sw model

Run on: July 3, 2001, 10:29:15 ; Search time 23.25 Seconds

(without alignments)
631.650 Million cell updates/sec

Title: US-09-541-752-2_COPY_235_345
Perfect score: 621
Sequence: 1 VVDNLTEEVRLYSCPRN.....DVALEHHECDVCGRSTG 111

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 425026 seqs, 133305027 residues

Total number of hits satisfying chosen parameters: 425026

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

SPREMBL_16:*
1: sp_archaea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate:*
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_rodent:*
12: sp_unclassified:*
13: sp_vertebrate:*
14: sp_virus:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	621	100.0	345	4	09UL22
2	621	100.0	345	4	09NBA1
3	591	95.2	345	11	09QY71
4	584	94.0	345	11	09JHV8
5	578	93.1	345	11	09EOX6
6	551	88.7	345	13	091946
7	318.5	51.3	370	4	09GAP0
8	318.5	51.3	370	11	09EOT1
9	121.5	19.6	326	11	035251
10	119.5	19.2	358	11	P97946
11	115.5	18.6	354	4	043315
12	108.5	17.5	148	13	042571
13	108.5	17.5	194	13	042572
14	105	16.9	185	4	015354
15	105	16.9	207	4	015628
16	105	16.9	210	6	029613
17	105	16.9	226	4	029613
18	104.5	16.8	147	4	09UH58
19	104.5	16.8	171	4	09H1W8

20	104.5	16.8	174	4	09UL23	09UL23 homo sapien
21	104.5	16.8	209	4	060720	060720 homo sapien
22	104.5	16.8	232	4	09H1W9	09H1W9 homo sapien
23	104.5	16.8	254	4	016889	016889 homo sapien
24	102.5	16.5	190	6	09XSF3	09XSF3 canis famill
25	102.5	16.5	190	6	09GL52	09GL52 sus scrofa
26	102.5	16.5	208	6	09XSF4	09XSF4 canis famill
27	102.5	16.5	214	6	09XSF5	09XSF5 canis famill
28	102.5	16.5	214	6	09MYV3	09MYV3 canis famill
29	102	16.4	188	6	09XSA8	09XSA8 bos taurus
30	102	16.4	193	6	09XSA9	09XSA9 bos taurus
31	102	16.4	301	5	09VWP6	09VWP6 drosophila
32	101.5	16.3	118	6	09MZB1	09MZB1 ovis aries
33	101.5	16.3	124	6	09GK00	09GK00 callithrix
34	101.5	16.3	190	6	076643	076643 ovis aries
35	101.5	16.3	418	13	057352	057352 coturnix co
36	101.5	16.3	420	6	09XSS0	09XSS0 bos taurus
37	100.5	16.2	144	13	073822	073822 brachydanio
38	100.5	16.2	188	13	073682	073682 brachydanio
39	100.5	16.2	190	11	09QX39	09QX39 spalax leuc
40	98	15.8	75	6	018843	018843 oryctolagus
41	98	15.8	78	6	09N1S2	09N1S2 capreolus c
42	98	15.8	123	6	09N1S1	09N1S1 capreolus c
43	97.5	15.7	211	13	09PUF7	09PUF7 gallus gall
44	97.5	15.7	146	11	09QXG6	09QXG6 rattus norv
45	97.5	15.7	190	6	09GKR0	09GKR0 equus cabal

ALIGNMENTS

RESULT	1	PRELIMINARY:	PRT:	345 AA.
ID	09UL22			
AC	09UL22			
DT	01-MAY-2000 (TREMBLrel. 13, Created)			
DT	01-MAY-2000 (TREMBLrel. 13, Last sequence update)			
DT	01-MAR-2001 (TREMBLrel. 16, Last annotation update)			
DE	SECRETORY GROWTH FACTOR-LIKE PROTEIN FALLOTTEIN (SPINAL CORD-DERIVED GROWTH FACTOR).			
DE	HSCDGF.			
GN	Homo sapiens (Human).			
OS	Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;			
OC	Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.			
OX	NCBI_TaxID=9606;			
RN	[1]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE=UTERUS;			
RA	Tsai Y.J., Lee R.K., Lin S.P.;			
RT	"FalLOTteIn, a novel growth factor like gene identified in human uterus";			
RL	Submitted (SEP-1998) to the EMBL/GenBank/DBJ databases.			
RN	[2]			
RP	SEQUENCE FROM N.A.			
RC	TISSUE=BRIN;			
RX	MEDLINE=20317014; PubMed=10858496;			
RA	Hamada T., Ui-Tel K., Miyata Y.;			
RT	"A novel gene derived from developing spinal cords, sCDGF, is a unique member of the PDGF/VEGF family";			
RL	FEBS Lett. 475:97-102(2000).			
DR	EMBL; AF091434; AA00049.1;			
DR	EMBL; AB033831; BAB03266.1;			
DR	InterPro: IPR000072;			
DR	InterPro: IPR000859;			
DR	Pfam: PF00341; PDGF. 1.			
DR	Pfam: PF00431; CUB. 1.			
DR	PROSITE: PS01180; CUB. 1.			
DR	PROSITE: PS50278; PDGF_2; 1.			
DR	SMART: SM00042; CUB. 1.			
SO	SEQUENCE 345 AA; 39029 MW; CDE9E51F40633E78 CRC64;			

Query Match

100.0%; Score 621; DB 4; Length 345;

Best Local Similarity 100.0%; Pred. No. 1.4e-63;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 VVDNLTLTEEVRLYSCPRNFSVSIRELKRDTDFMPGCLLVKRCGNCACCLHNCNEC 60
DB 235 VVDNLTLTEEVRLYSCPRNFSVSIRELKRDTDFMPGCLLVKRCGNCACCLHNCNEC 294
OY 61 QCVPSKYTKKKYHEVQLRPKTVGRLHKSITDVALEHHEECDCVCRGSTGG 111
DB 295 QCVPSKYTKKKYHEVQLRPKTVGRLHKSITDVALEHHEECDCVCRGSTGG 345

RESULT 2
O9NRA1 PRELIMINARY; PRT; 345 AA.

AC 09NRA1:
DT 01-OCT-2000 (TREMBlrel. 15, Created)
DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
DT 01-MAR-2001 (TREMBlrel. 16, Last annotation update)
DE PLATELET-DERIVED GROWTH FACTOR C.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominoidea; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RA Li X., Ponten A., Aase K., Karlsson L., Abramsson A., Untela M.,
RA Backstrom G., Hellstrom M., Bostrom H., Li H., Soriano P.,
RA Bershoitz C., Heidlin C.-H., Allitalo K., Oskman A., Eriksson U.;
RT "PDGF-C is a novel protease-activated ligand for the PDGF alpha
receptor.";
RL Nat. Cell Biol. 0:0-0(2000).
DR EMBL: AF244813; AAF80597.1; -
DR InterPro: IPR000072; -
DR InterPro: IPR000859; -
DR Pfam: PF00341; PDGF_1.
DR Pfam: PF00431; CUB; 1.
DR PROSITE: PS01180; CUB; 1.
DR PROSITE: PS50278; PDGF_2; 1.
DR SMART: SM00042; CUB; 1.
SO SEQUENCE 345 AA; 39043 MM; 5908899CEA55CC5EA CRC64;

Query Match 100.0%; Score 621; DB 4; Length 345;
Best Local Similarity 100.0%; Pred. No. 1.4e-63;
Matches 111; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 VVDNLTLTEEVRLYSCPRNFSVSIRELKRDTDFMPGCLLVKRCGNCACCLHNCNEC 60
DB 235 VVDNLTLTEEVRLYSCPRNFSVSIRELKRDTDFMPGCLLVKRCGNCACCLHNCNEC 294
OY 61 QCVPSKYTKKKYHEVQLRPKTVGRLHKSITDVALEHHEECDCVCRGSTGG 111
DB 295 QCVPSKYTKKKYHEVQLRPKTVGRLHKSITDVALEHHEECDCVCRGSTGG 345

RESULT 3
O9OY71 PRELIMINARY; PRT; 345 AA.

AC 09OY71:
DT 01-MAY-2000 (TREMBlrel. 13, Created)
DT 01-MAY-2000 (TREMBlrel. 13, Last sequence update)
DT 01-MAR-2001 (TREMBlrel. 16, Last annotation update)
DE FALLOUREIN.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=OVARY;
DT Tsai Y.-J., Lee R.K.-K., Chen Y.-H., Lin S.-P., Cheng W.T.-K.;

RT "cDNA cloning of falloletin from mouse ovary."
RL Submitted (JAN-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF117608; AAF22516.1; -
DR InterPro: IPR000072; -
DR InterPro: IPR000859; -
DR Pfam: PF00431; CUB; 1.
DR PROSITE: PS01180; CUB; 1.
DR PROSITE: PS50278; PDGF_2; 1.
DR SMART: SM00042; CUB; 1.
SO SEQUENCE 345 AA; 38741 MM; 3A58A1F701B84E2A2 CRC64;

Query Match 95.2%; Score 591; DB 11; Length 345;
Best Local Similarity 93.7%; Pred. No. 4e-60;
Matches 104; Conservative 4; Mismatches 3; Indels 0; Gaps 0;

OY 1 VVDNLTLTEEVRLYSCPRNFSVSIRELKRDTDFMPGCLLVKRCGNCACCLHNCNEC 60
DB 235 VVDNLTLTEEVRLYSCPRNFSVSIRELKRDTDFMPGCLLVKRCGNCACCLHNCNEC 294
OY 61 QCVPSKYTKKKYHEVQLRPKTVGRLHKSITDVALEHHEECDCVCRGSTGG 111
DB 295 QCVPSKYTKKKYHEVQLRPKTVGRLHKSITDVALEHHEECDCVCRGNAGG 345

RESULT 4
O9JHVB PRELIMINARY; PRT; 345 AA.

AC 09JHVB:
DT 01-OCT-2000 (TREMBlrel. 15, Created)
DT 01-OCT-2000 (TREMBlrel. 15, Last sequence update)
DT 01-MAR-2001 (TREMBlrel. 16, Last annotation update)
DE PLATELET-DERIVED GROWTH FACTOR C.
GN PDGFC.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=SWISS-WEBSTER/NIH;
RA Ding H., Wu X., Kim I., Tam P.P.L., Koh G.Y., Nagy A.;
RT "The mouse *Pdgfr* gene: Dynamic expression in embryonic tissues during
organogenesis.";
RL Mech. Dev. 0:0-0(2000).
DR EMBL: AF286725; AAF91483.1; -
DR InterPro: IPR000072; -
DR InterPro: IPR000859; -
DR Pfam: PF00431; CUB; 1.
DR PROSITE: PS01180; CUB; 1.
DR PROSITE: PS50278; PDGF_2; 1.
DR SMART: SM00042; CUB; 1.
SO SEQUENCE 345 AA; 38886 MM; FA1486BD6D362F8 CRC64;

Query Match 94.0%; Score 584; DB 11; Length 345;
Best Local Similarity 92.8%; Pred. No. 2.5e-59;
Matches 103; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

OY 1 VVDNLTLTEEVRLYSCPRNFSVSIRELKRDTDFMPGCLLVKRCGNCACCLHNCNEC 60
DB 235 VVDNLTLTEEVRLYSCPRNFSVSIRELKRDTDFMPGCLLVKRCGNCACCLHNCNEC 294
OY 61 QCVPSKYTKKKYHEVQLRPKTVGRLHKSITDVALEHHEECDCVCRGSTGG 111
DB 295 QCVPSKYTKKKYHEVQLRPKTVGRLHKSITDVALEHHEECDCVCRGNAGG 345

RESULT 5
O9EOX6 PRELIMINARY; PRT; 345 AA.

AC 09EOX6:
DT 01-MAR-2001 (TREMBlrel. 16, Created)

DT 01-MAR-2001 (TREMBlrel. 16, last sequence update)
 DT 01-MAR-2001 (TREMBlrel. 16, last annotation update)
 DE SPINAL CORD-DERIVED GROWTH FACTOR.
 GN RSCDGF.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-WISTAR; TISSUE-KIDNEY;
 RA Hamada T., Ut-Tel K., Imaki J., Miyata Y.;
 RT "Molecular Cloning of SCDF-B, a Novel Growth Factor Homologous to
 SCDF/PDGF-C/fallotelin.";
 RL Biochem. Biophys. Res. Commun. 0:0-0(2000).
 DR EMBL: AB03830; BAB19969.1; -
 SO SEQUENCE 345 AA; 38734 MW; F296DA6E98765D10 CRC64;

Query Match 93.1%; Score 578; DB 11; Length 345;
 Best Local Similarity 92.7%; Pred. No. 1.2e-58;
 Matches 102; Conservative 4; Mismatches 4; Indels 0; Gaps 0;

OY 2 VDLNLTTEVRVLYSCTPRNFVSIREELKRTDTIFMPGCLLYKRCGNCACCLHNCNEQ 61
 DB 236 VNLNLEEVLYSCTPRNFVSIREELKRTDTIFMPGCLLYKRCGNCACCLHNCNEQ 295
 OY 62 CVPKSVTKKYNHEVLOLRPKTVRGGLKSLTDVALEHNEECDCVCRSTGG 111
 DB 296 CVPKSVTKKYNHEVLOLRPKTVRGGLKSLTDVALEHNEECDCVCRSTGG 345

RESULT 6
 O91946 PRELIMINARY: PRT: 345 AA.
 AC 091946;
 DT 01-OCT-2000 (TREMBlrel. 15, Created)
 DT 01-OCT-2000 (TREMBlrel. 15, last sequence update)
 DT 01-MAR-2001 (TREMBlrel. 16, last annotation update)
 DE SPINAL CORD-DERIVED GROWTH FACTOR.
 GN SCDF.
 OS Gallus gallus (Chicken).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
 OC Gallus.
 OX NCBI_TaxID=9031;
 RN [1]
 RP SEQUENCE FROM N.A.
 RC STRAIN-WHITE LEGHORN; TISSUE-SPINAL CORD;
 RA MEDLINE-20317014; PubMed-10858496;
 RA Hamada T., Ut-Tel K., Miyata Y.;
 RT "A novel gene derived from developing spinal cords, SCDF, is a unique
 member of the PDGF/VEGF family.";
 RL FEBS Lett. 475:97-102(2000).
 DR EMBL: AB038329; BAB03265.1; -
 DR InterPro: IPR000072; -
 DR InterPro: IPR000859; -
 DR Pfam: PF00431; CUB: 1.
 DR PROSITE: PS01180; CUB: 1.
 DR PROSITE: PS50278; PDGF_2: 1.
 DR SMART: SM00042; CUB: 1.
 SO SEQUENCE 345 AA; 38940 MW; 97ACEA992BF5128C CRC64;

Query Match 88.7%; Score 551; DB 13; Length 345;
 Best Local Similarity 86.5%; Pred. No. 1.6e-55;
 Matches 96; Conservative 9; Mismatches 6; Indels 0; Gaps 0;

OY 1 VVDNLTTEVRVLYSCTPRNFVSIREELKRTDTIFMPGCLLYKRCGNCACCLHNCNEQ 60
 DB 235 VVDNLTTEVRVLYSCTPRNFVSIREELKRTDTIFMPGCLLYKRCGNCACCLHNCNEQ 294
 OY 61 QCVPSKTKKYNHEVLOLRPKTVRGGLKSLTDVALEHNEECDCVCRSTGG 111

DB 295 QCVPSKTKKYNHEVLOLRPKTVRGGLKSLTDVALEHNEECDCVCRSTGG 345

RESULT 7
 O96ZP0 PRELIMINARY: PRT: 370 AA.
 AC 096ZP0;
 DT 01-MAR-2001 (TREMBlrel. 16, Created)
 DT 01-MAR-2001 (TREMBlrel. 16, last sequence update)
 DT 01-MAR-2001 (TREMBlrel. 16, last annotation update)
 DE SPINAL CORD-DERIVED GROWTH FACTOR-B (MSTP036).
 GN HSCDGF-B.
 OS Homo sapiens (Human).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Primates; Catarrhini; Homiidae; Homo.
 OX NCBI_TaxID=9606;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Hamada T., Ut-Tel K., Imaki J., Miyata Y.;
 RT "Molecular Cloning of SCDF-B, a Novel Growth Factor Homologous to
 SCDF/PDGF-C/fallotelin.";
 RL Biochem. Biophys. Res. Commun. 0:0-0(2000).
 RN [2]
 RP SEQUENCE FROM N.A.
 RC TISSUE-AORTA;
 RA Liu B., Liu Y.O., Wang X.Y., Zhao B., Sheng H., Zhao X.W., Liu S.,
 RA Xu Y.Y., Ye J., Song L., Gao Y., Zhang C.L., Zhang J., Wei Y.J.,
 RA Cao H.Q., Zhao Y., Liu L.S., Ding J.F., Gao R.L., Wu Q.Y., Qiang B.O.,
 RA Yuan J.G., Liew C.C., Zhao M.S., Hui R.T.;
 RL Submitted (DEC-1998) to the EMBL/GenBank/DBJ databases.
 DR EMBL: AB038332; BAB18903.1; -
 DR EMBL: AF113216; AAG39287.1; -
 SO SEQUENCE 370 AA; 42848 MW; D387F485E7B87674 CRC64;

Query Match 51.3%; Score 318.5; DB 4; Length 370;
 Best Local Similarity 53.3%; Pred. No. 1e-28;
 Matches 57; Conservative 14; Mismatches 33; Indels 3; Gaps 1;

OY 2 VDLNLTTEVRVLYSCTPRNFVSIREELKRTDTIFMPGCLLYKRCGNCACCLHNCNEQ 61
 DB 258 VDLNLTTEVRVLYSCTPRNFVSIREELKRTDTIFMPGCLLYKRCGNCACCLHNCNEQ 317
 OY 62 CVPKSVTKKYNHEVLOLRPKTVRGGLKSLTDVALEHNEECDCVCRSTGG 105
 DB 318 CVPKSVTKKYNHEVLOLRPKTVRGGLKSLTDVALEHNEECDCVCRSTGG 364

RESULT 8
 O9EOT1 PRELIMINARY: PRT: 370 AA.
 AC 09EOT1;
 DT 01-MAR-2001 (TREMBlrel. 16, Created)
 DT 01-MAR-2001 (TREMBlrel. 16, last sequence update)
 DT 01-MAR-2001 (TREMBlrel. 16, last annotation update)
 DE SPINAL CORD-DERIVED GROWTH FACTOR-B.
 GN RSCDGF-B.
 OS Rattus norvegicus (Rat).
 OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
 OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
 OX NCBI_TaxID=10116;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Hamada T., Ut-Tel K., Imaki J., Miyata Y.;
 RT "Molecular Cloning of SCDF-B, a Novel Growth Factor Homologous to
 SCDF/PDGF-C/fallotelin.";
 RL Biochem. Biophys. Res. Commun. 0:0-0(2000).
 DR EMBL: AB052170; BAB18920.1; -
 SO SEQUENCE 370 AA; 42809 MW; 7BB8A251F679BF73 CRC64;

Query Match 51.3%; Score 318.5; DB 11; Length 370;

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Best Local Similarity 52.3%; Pred. No. 1e-28;
Matches 56; Conservative 17; Mismatches 31; Indels 3; Gaps 1

Oy 2 VDLNLTEBVRLYSCTPRNFVSIRELKRDTITMPRCGLLYKRGCGNACCLHNCNECQ 61
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
Db 258 VDLRLNDVDVKRYSCTPRNHVSINLREELKLTNAVFPRCLLYVGRGCGNCGCTLMKSC 317

Oy 62 CVPKSVTKKKYHNEVLDRP---KTGVRGLHKSLTDVALENHNEEDCVC 105
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
Db 318 CSSGTVKKYHNEVLKFERGHEFRKRGRKAKMVALDIQDLNHERCDIC 364

RESULT 9
035251 PRELIMINARY: PRT: 326 AA.
ID 035251
AC 035251;
DT 01-JAN-1998 (TREMBLrel. 05, Created)
DT 01-JAN-1998 (TREMBLrel. 05, Last sequence update)
DE 01-MAR-2001 (TREMBLrel. 16, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR D.
GN VEGF-D.
OS Rattus norvegicus (Rat.).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=SPRAGUE DAWLEY;
RX MEDLINE=97349118; PubMed=9205122;
RA Yamada Y., Nezu J., Shimane M., Hirata Y.;
RT "Molecular cloning of a novel vascular endothelial growth factor,
RT VEGF-D";
RL Genomics 42:483-488(1997);
DR EMBL; AF014827; AAB6557.1; -.
DR HSSP; P15692; 1VPP.
DR InterPro; IPR000072; -.
DR Pfam; PF00341; PDGF_1.
DR ProDom; PD001629; -.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS0278; PDGF_2; 1.
DR SMART; SM00141; PDGF; 1.
SO SEQUENCE 326 AA; 37112 MW; 1261AFA373596C00 CRC64;

Query Match 19.6%; Score 121.5; DB 11; Length 326;
Best Local Similarity 33.3%; Pred. No. 4.5e-06;
Matches 36; Conservative 15; Mismatches 42; Indels 15; Gaps 6

Oy 4 LNLLEBVRLYSCTPRNFVSIREL-KTDTITFPMGCLLYKRGCGNACCLHNCNECQ 62
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
Db 104 LKVIDEOWRQCSPTRECEVASELAKTITNFPPKPCVPRCG---CC--NEESVNC 158

Oy 63 V---PSKVTKKKYHNEVLDRPKTGVGRGLHKSLTDVALENHNEEDCVC 107
   |:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
Db 159 MMTSTSYISKQLFEISV--PLTSV----PELVPKVIAIHHNTGCKKCLPTG 200

RESULT 10
P97946 PRELIMINARY: PRT: 358 AA.
ID P97946
AC P97946;
DT 01-MAY-1997 (TREMBLrel. 03, Created)
DT 01-MAY-1997 (TREMBLrel. 03, Last sequence update)
DE 01-MAR-2001 (TREMBLrel. 16, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR D (C-FOS INDUCED GROWTH FACTOR).
GN VEGF-D OR FIGF.
OS Mus musculus (Mouse).
OC Eukaryota; Metazoa; Chordata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI_TaxID=10090;
RN [1]
RP SEQUENCE FROM N.A.
RC STRAIN=C57BL/6J;

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RA MEDLINE=97030254; PubMed=8876195;
RA Orlandini M., Marconcini L., Ferruzzi R., Oliviero S.;
RT "Identification of a c-fos-induced gene that is related to the
RT platelet-derived growth factor/vascular endothelial growth factor
RT family.";
RL Proc. Natl. Acad. Sci. U.S.A. 93:11675-11675(1996).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RX MEDLINE=97349118; PubMed=9205122;
RA Yamada Y., Nezu J., Shimane M., Hirata Y.;
RT "Molecular cloning of a novel vascular endothelial growth factor,
RT VEGF-D.";
RL Genomics 42:483-488(1997).
DR EMBL; X99572; CA67892.1; -
DR EMBL; D89628; BA14002.1; -
DR HSSP; P15692; 1VP.
DR MCD; MGI:108037; Flg1f.
DR InterPro; IPR000072; -
DR Pfam; PF00341; PDGF; 1.
DR ProDom; PD001629; -; 1.
DR PROSITE; PS00249; PDGF_1; 1.
DR PROSITE; PS50278; PDGF_2; 1.
DR SMART; SM00141; PDGF; 1.
SQ SEQUENCE 358 AA; 40908 MW; 6636b17fbbf07037c CRC64;

Query Match 19.2%; Score 119.5; DB 11; Length 358;
Best Local Similarity 33.3%; Pred. No. 8.4e-06;
Matches 36; Conservative 15; Mismatches 42; Indels 15; Gaps 6;

OY 4 LNLTLEFRLXSCPRNRSVSIREL-KRTDIFPPGQLVRRGSGNACCLAHNNEQC 62
Db 104 LKVIDEEMORTQCSREFCEVASELGGTNTFFKPCPVNFRCG---CC--NEGVWC 158
OY 63 V---PSKTKRYHEVLQLRPTGVGLHKSLLDVALLEHNEEDCYCRG 107
Db 159 MNTSYSTYSKOLFELSV--PLTSV----PELVPRVIAHNHGCKCLPTG 200

RESULT 11
O43915 PRELIMINARY; PRT: 354 AA.
AC O43915;
DT 01-JUN-1998 (TREMBLrel. 06, Created)
DT 01-JUN-1998 (TREMBLrel. 06, Last sequence update)
DT 01-MAR-2001 (TREMBLrel. 16, Last annotation update)
DE GROWTH FACTOR FIGF.
GN FIGF OR VEGF-D.
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RX MEDLINE=98140120; PubMed=9479493;
RA Rocchiigiani M., Lestingi M., Luddi A., Orlandini M., Franco B.,
RA Rossi E., Ballabio A., Zuffardi O., Oliviero S.;
RT "Human FIGF: cloning, gene structure, and mapping to chromosome Xp22.1
RT between the FIGA and the GRPR genes.";
RL Genomics 47:207-216(1998).
RN [2]
RP SEQUENCE FROM N.A.
RC TISSUE=LUNG;
RX MEDLINE=97349118; PubMed=9205122;
RA Yamada Y., Nezu J., Shimane M., Hirata Y.;
RT "Molecular cloning of a novel vascular endothelial growth factor,
RT VEGF-D.";
RL Genomics 42:483-488(1997).
RN [3]
RP SEQUENCE FROM N.A.
RX MEDLINE=98118549; PubMed=9435929;
RA Achen M.G., Jeltsch M., Kukk E., Maekinen T., Viteli A., Wilks A.F.,

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RA Alltalo K., Stacker S.A.:
RT "Vascular endothelial growth factor D (VEGF-D) is a ligand for the
RT tyrosine kinases VEGF receptor 2 (Flk1) and VEGF receptor 3 (Flk4).";
RL Proc. Natl. Acad. Sci. U.S.A. 95:548-553(1998).
DR EMBL: Y12864; CAA73371.1; JOINED.
DR EMBL: Y12865; CAA73371.1; JOINED.
DR EMBL: Y12866; CAA73371.1; JOINED.
DR EMBL: Y12867; CAA73371.1; JOINED.
DR EMBL: Y12868; CAA73371.1; JOINED.
DR EMBL: Y12869; CAA73371.1; JOINED.
DR EMBL: Y12870; CAA73371.1; JOINED.
DR EMBL: D89630; BAA24264.1; -.
DR EMBL: AJ000185; CAA03942.1; -.
DR EMBL: Y12863; CAA73370.1; -.
DR HSSP: P15692; 1VPP.
DR InterPro: IPR000072; -.
DR Pfam: PF00341; PDGF_1; -.
DR ProDom: PD001629; -. 1.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS0278; PDGF_2; 1.
DR SMART: SM00141; PDGF; 1.
SQ SEQUENCE 354 AA; 40444 MW; 2048D769D735173E CRC64;

Query Match 18.6%; Score 115.5; DB 4; Length 354;
Best Local Similarity 33.0%; Pred. No. 2,4e-05;
Matches 34; Conservative 14; Mismatches 44; Indels 11; Gaps 5;

OY 4 LNLLEEVRLVSGTSPNFSVIREL-KRTDTIFWPGCLLVKRCGNCACCLHNECQ-0 61
DB 99 LKVIIEEMORTQSPRTEVASELGKSTNTEFKPCVNVFRCG---CCNESELIICMN 155
OY 62 CVPSKVTKKYHVIQLRPKTVGRLHSLTDVLEHNECCDV 104
DB 156 TSTSYISKOLFELSV---PLTSV---PELVPKVYVANHGTCKCL 192

RESULT 12
O42571 PRELIMINARY: PRT: 148 AA.
ID 042571
AC 042571
DT 01-JAN-1998 (TREMBLrel. 05, Created)
DT 01-JAN-1998 (TREMBLrel. 05, Last sequence update)
DT 01-MAR-2001 (TREMBLrel. 16, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR 122.
GN VEGF.
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae; Pipidae;
OC Xenopodinae; Xenopus.
OX NCBI_TaxID=8335;
RN [1]
RP SEQUENCE FROM N.A.
RA Cleaver O., Tonissen K.F., Saha M.S., Krieg P.A.:
RL Submitted (JUN-1997) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF008593; AAB63679.1; -.
DR HSSP: P15692; 1VPP.
DR InterPro: IPR000072; -.
DR Pfam: PF00341; PDGF; 1.
DR ProDom: PD001629; -. 1.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS0278; PDGF_2; 1.
DR SMART: SM00141; PDGF; 1.
SQ SEQUENCE 148 AA; 17234 MW; 4AD153CA2F8B1E95 CRC64;

Query Match 17.5%; Score 108.5; DB 13; Length 148;
Best Local Similarity 25.8%; Pred. No. 6,6e-05;
Matches 23; Conservative 21; Mismatches 34; Indels 11; Gaps 4;

OY 16 CTPRNFVSIREL-KRTDTIFWPGCLLVKRCGNCACCLHNECQVPSKYTKYHVEY 74
DB 52 COVREILVDFQYPRVEVEYIFKPCVPLMRCAG---CC--NDESLCVTECYNTTMOI 106

OY 75 LQLRPKTVGRLHSLTDVLEHNECCD 103
DB 107 MKIKPH-----ISOHIMDSFOOHSQCEC 130

RESULT 13
O42572 PRELIMINARY: PRT: 194 AA.
ID 042572
AC 042572
DT 01-JAN-1998 (TREMBLrel. 05, Created)
DT 01-JAN-1998 (TREMBLrel. 05, Last sequence update)
DT 01-MAR-2001 (TREMBLrel. 16, Last annotation update)
DE VASCULAR ENDOTHELIAL GROWTH FACTOR 196.
GN VEGF.
OS Xenopus laevis (African clawed frog).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Amphibia; Batrachia; Anura; Mesobatrachia; Pipidae; Pipidae;
OC Xenopodinae; Xenopus.
OX NCBI_TaxID=8335;
RN [1]
RP SEQUENCE FROM N.A.
RA Cleaver O., Tonissen K.F., Saha M.S., Krieg P.A.:
RL Submitted (JUN-1997) to the EMBL/GenBank/DBJ databases.
DR EMBL: AF008594; AAB63680.1; -.
DR HSSP: P15692; 1VGH.
DR InterPro: IPR000072; -.
DR Pfam: PF00341; PDGF; 1.
DR ProDom: PD001629; -. 1.
DR PROSITE: PS00249; PDGF_1; 1.
DR PROSITE: PS0278; PDGF_2; 1.
DR SMART: SM00141; PDGF; 1.
SQ SEQUENCE 194 AA; 22672 MW; 85D7BEC7CEFE17E CRC64;

Query Match 17.5%; Score 108.5; DB 13; Length 194;
Best Local Similarity 25.8%; Pred. No. 8,6e-05;
Matches 23; Conservative 21; Mismatches 34; Indels 11; Gaps 4;

OY 16 CTPRNFVSIREL-KRTDTIFWPGCLLVKRCGNCACCLHNECQVPSKYTKYHVEY 74
DB 52 COVREILVDFQYPRVEVEYIFKPCVPLMRCAG---CC--NDESLCVTECYNTTMOI 106
OY 75 LQLRPKTVGRLHSLTDVLEHNECCD 103
DB 107 MKIKPH-----ISOHIMDSFOOHSQCEC 130

RESULT 14
O15354 PRELIMINARY: PRT: 185 AA.
ID 015354
AC 015354
DT 01-NOV-1996 (TREMBLrel. 01, Created)
DT 01-NOV-1996 (TREMBLrel. 01, Last sequence update)
DT 01-MAR-2001 (TREMBLrel. 16, Last annotation update)
DE C-SIS PROTO-ONCOGENE (FRAGMENT).
OS Homo sapiens (Human).
OC Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX NCBI_TaxID=9606;
RN [1]
RP SEQUENCE FROM N.A.
RA TISSUE-CHORIOCARCINOMA;
RX MEDLINE=9538493; PubMed=7659502;
RT "A novel human C-SIS mRNA species is transcribed from a promoter in c-sis intron 1 and contains the code for an alternative PDGF B-like protein.";
RT Nucleic Acids Res. 23:2815-2822(1995).
RL EMBL: X83705; CAA58679.1; -.
DR HSSP: P01127; 1POG.
DR InterPro: IPR000072; -.
DR Pfam: PF00341; PDGF; 1.

